NORTH CAROLINA DIVISION OF AIR QUALITY

Air Permit Review

Issue Date: Month XX, 2025

Region: Washington Regional Office
County: Lenoir
NC Facility ID: 5400187
Inspector's Name: Betsy Huddleston
Date of Last Inspection: 09/05/2024
Compliance Code: 3 / Compliance - inspection

Facility Data

Applicant (Facility's Name): MasterBrand Cabinets LLC - Kinston Plant #9
Facility Address: 651 Collier-Loftin Road
Kinston, NC 28504

SIC: 2434 / Wood Kitchen Cabinets
NAICS: 33711 / Wood Kitchen Cabinet and Countertop Manufacturing

Facility Classification: Before: Title V **After:** Title V
Fee Classification: Before: Title V **After:** Title V

Permit Applicability (this application only)

SIP: 15A NCAC 02D .0512, .0516, .0521, .0516, .0614, .1806, and 02Q .0317
NSPS: N/A
NESHAP: 15A NCAC 02D .1111 – Subpart JJ, and ZZZZ
PSD: 15A NCAC 02D .0530
PSD Avoidance: 15A NCAC 02Q .0317 for 02D .0530
NC Toxics: N/A
112(r): N/A
Other: N/A

Contact Data

Facility Contact	Authorized Contact	Technical Contact
Scott Kelly EHS Specialist (252) 559-2503 651 Collier-Loftin Road Kinston, NC 28504	George Lemerise General Mgr, Kinston Ops (252) 559-2223 651 Collier-Loftin Road Kinston, NC 28504	Scott Kelly EHS Specialist (252) 559-2503 651 Collier-Loftin Road Kinston, NC 28504

Application Data

Application Numbers: 5400187.22A, .23A, .24A, and .24B
Date Received: 06/03/2022
Application Type: Renewal/Modification (.22A)
502(b)(10) notification (.23A, .24B)
Name Change (.24A)
Application Schedule: TV-Renewal

Existing Permit Data

Existing Permit Number: 08804/T13
Existing Permit Issue Date: 09/09/2020
Existing Permit Expiration Date: 11/30/2022

Total Actual emissions in TONS/YEAR:

CY	SO2	NOX	VOC	CO	PM10	Total HAP	Largest HAP
2022	0.0100	0.7500	116.74	0.6300	6.55	19.73	13.83 [Xylene (mixed isomers)]
2021	0.0100	2.23	161.71	1.27	6.06	9.52	4.17 [Xylene (mixed isomers)]
2020	---	2.54	192.33	1.38	5.85	10.64	5.06 [Xylene (mixed isomers)]
2019	0.1600	2.23	278.82	1.21	6.17	25.08	11.84 [Xylene (mixed isomers)]
2018	0.5300	3.65	248.91	0.7900	7.09	21.50	9.26 [Xylene (mixed isomers)]

Review Engineer: Chengqing Xiao

Review Engineer's Signature: **Date: Month XX, 2025**

Comments / Recommendations:
Issue 08804/T14
Permit Issue Date: Month XX, 2025
Permit Expiration Date: Month XX, 2029

I. Purpose of Applications

Application No. 5400187.22A

This permitting action is a renewal of an existing Title V permit pursuant to 02Q .0513. The existing Title V permit (**08804T13**) was issued on **September 9, 2020**, with an expiration date of **November 30, 2022**. The renewal with modification application **5400187.22A** was submitted on **May 31, 2022** at least six months prior to the original expiration date **November 30, 2022**. Therefore, the existing permit shall not expire until the renewal permit has been issued or denied. All terms and conditions of the existing permit shall remain in effect until the renewal permit has been issued or denied.

MasterBrand Cabinets LLC (MasterBrand or MBC) has requested the following changes to Air Permit No. 08804T13:

(1) The addition of one Safety Kleen parts washer **(ID No. IES11)** to the insignificant activities list. This part washer is classified as an insignificant activity in accordance with the definition of 15A NCAC 02Q .0503(8).

(2) Revise the compliance assurance monitoring (CAM) indicator ranges for bagfilters (ID Nos. BH-1 through BH-5 (Permit Condition 2.1 B.3.c). Particulate emissions from woodworking operations **(ID Nos. ES-WO1, ES-WO2, and ES-WO3)** throughout the facility are controlled by bagfilters **(ID Nos. BH-1 through BH-8)**. Bagfilters **(ID Nos. BH-1 through BH-5)** are equipped with compressed air blow down cleaning systems while bagfilters **(ID Nos. BH-6 through BH-8)** are equipped with pulse-jet cleaning systems. MasterBrand must record the pressure drop across each bagfilter each day. MasterBrand requests modifying the acceptable indicator range for bagfilters **(ID Nos. BH-1 through BH-5)** to 0.5" H_2O to 8.0" H_2O; no changes are requested for the indicator ranges for bagfilters **(ID Nos. BH-6 through BH-8)**. The excursions are defined as a pressure drop less than 0.5" H_2O or greater than 8.0" H_2O for bagfilters **(ID Nos. BH-1 through BH-5),** and a pressure drop less than 0.5" H_2O or greater than 5.0" H_2O Bagfilters **(ID Nos. BH-6 through BH-8)**.

(3) MasterBrand sent in an Air Permit 502(b)(10) change notification request (**Appl. ID# 5400187.23A**) on May 19, 2023 (received May 22, 2023) to replace the existing **bagfilter (ID No. BH-4 (5,477 ft^2)) in series with cyclone (ID No. CY-1) and the bagfilter BH-5 (4,350 ft^2))** with two new Torit 376-RFW-10 Dust Collectors **(ID Nos. BH-4 and BH-5, respectively)**. The facility indicated that the current bagfilters **(ID Nos. BH-4 and BH-5)** and accompanying cyclone **(ID No. CY-1)** are from the original plant construction when it was a tobacco processing facility, and the updated dust collectors are designed for wood dust specifically and will provide an equal or better level of particulate control at the existing units. Processed air will be blown back into the facility for seasonal heating and cooling. No changes will be made to the currently permitted operating equipment **(ID Nos. ES-WO1, ES-WO2, and ES-WO3)** whose particulate emissions are controlled by the dust collectors. The new dust collectors will have a design capacity of 48,000 standard cubic feet per minute (SCFM) each and will include 376 bags that have a combined filter area of 4,891 ft^2 and a 9.8 air to 1 media ratio. Existing bagfilters **(ID Nos. BH-4 and BH-5)** each have a design capacity of 42,000 SCFM. David B. Hughes (NCDAQ) acknowledged the 502(b)(10) request in a letter to MasterBrand on June 5, 2023. The 502(b)(10) notification will be consolidated with the application for permit renewal application (5400187.22A), and the replacement of equipment will be implemented in the renewed Title V permit.

(4) Ms. Gaines, environmental Manager of MasterBrand Cabinets LLC, informed DAQ via an email on October 24, 2024 that MasterBrand Cabinets Inc. changed their name to MasterBrand Cabinets LLC in December 2022. Per this permit engineer's request, Mr. Kelly emailed a revised Form A with the facility name change request. The TV-Administrative Name Change application for MasterBrand Cabinets LLC - Kinston Plant #9 (**Appl. ID# 5400187.24A**) was received by DAQ on November 7, 2024. The name change application 5400187.24A will be consolidated with the permit renewal application 5400187.22A. The permittee's name has been changed to MasterBrand Cabinets LLC - Kinston Plant #9 and the facility's name in DAQ IBEAM has been updated.

(5) An Air Permit 502(b)(10) change notification request (**Appl. ID# 5400187.24B**) submitted by MasterBrand Cabinets LLC was received on November 4, 2024. The facility requested to replace the existing bagfilters **(ID Nos. BH-2 (5,684 ft^2) and BH-3 (5,648 ft^2))** with one new Torit 484-RF-12 Dust Collector **(ID: BH-3)** with proposed operational date in May 2025. The facility indicated that the current bagfilters **(ID Nos. BH-**

2 and BH-3) are from the original plant construction when it was a tobacco processing facility. The updated dust collector is specifically designed for wood dust and will provide equal or better particulate control than the existing units. Processed air may be blown back into the facility for seasonal heating and cooling. No changes will be made to the currently permitted operating equipment **(ID Nos. ES-WO1, ES-WO2, and ES-WO3)** whose particulate emissions are controlled by the dust collectors. The new dust collector (BH-3) will have a design capacity of 70,000 CFM and will include 484 bags that have a combined filter area of 7,502 ft^2 and a 9.3 air to 1 media ratio. Existing bagfilters **(ID Nos. BH-2 and BH-3)** each have a design capacity of 36,000 SCFM. An acknowledgement letter for the 502(b)(10) notification request was sent to MasterBrand on November 19, 2024. The 502(b)(10) notification (5400187.24B) will be consolidated with the application for permit renewal with modification (5400187.22A), and the replacement of equipment will be implemented in the renewed Title V permit.

Application No. 5400187.23A (consolidated into 5400187.22A)

As discussed in (3), above, MasterBrand submitted a 502(b)(10) notification on May 19, 2023 in order to replace two existing bagfilters and one cyclone with two new bagfilters. David B. Hughes (NCDAQ) acknowledged the 502(b)(10) request in a letter to MasterBrand on June 5, 2023. The 502(b)(10) notification will be consolidated with the application for permit renewal application (5400187.22A). DAQ's analysis of the 502(b)(10) application eligibility is discussed below.

Application No. 5400187.24A (consolidated into 5400187.22A)

As discussed in (4), above, MasterBrand submitted an application to change the Permittee's name on the existing Title V permit.

Former name: MasterBrand Cabinets, Inc. – Kinston Plant #9
New name: MasterBrand Cabinets LLC - Kinston Plant #9

This application for name change will be consolidated with the application for permit renewal application (5400187.22A)

Application No. 5400187.24B (consolidated into 5400187.22A)

As discussed in (5), above, MasterBrand submitted a 502(b)(10) notification on November 4, 2024 in order to replace two bagfilters with one new bagfilter. NCDAQ acknowledged the 502(b)(10) request in a letter to MasterBrand on November 19, 2024. The 502(b)(10) notification will be consolidated with the application for permit renewal application (5400187.22A). DAQ's analysis of the 502(b)(10) application eligibility is discussed below.

502(b)(10) modification analysis:

An applicant must confirm that a proposed 502(b)(10) change meets the definition in 02Q .0523(a) by filling out a checklist provided by DAQ. MasterBrand Cabinets LLC – Kinston Plant #9 submitted the checklist, certifying that the proposed replacements (1) replace the bagfilters (ID Nos. BH-4 and BH-5) with two new Torit 376-RFW-10 Dust Collectors (ID Nos. BH-4 and BH-5); and (2) replace the bagfilters (ID Nos. BH-2 and BH-3) with one Torit 484-RF-12 Dust Collector (ID: BH-3) would qualify as a 502(b)(10) change, respectively.

The table below examines the criteria for a 502(b)(10) change:

502(b)(10) Qualification Checklist	Disallows 502(b)(10)?	Discussion
This change does not violate any existing requirement in the current Title V air quality permit.	No	The new bagfilters will not violate any existing requirements
This change does not cause emissions allowed under the permit to be exceeded.	No	The new bagfilters will provide an equal or better level of particulate control at the existing units. Therefore, this change does not cause emissions allowed under the permit to be exceeded.
This change does not require a case-by-case determination (e.g. BACT)	No	The new bagfilters replaced the existing bagfilters and therefore, they do not require a case-by-case determination (e.g. BACT)
This change is not a modification under Title I of the federal Clean Air Act.	No	The replacement of an existing bagfilters is not a modification under Title I of the federal Clean Air Act.
This change does not alter (modify or add to) any existing monitoring, reporting or recordkeeping provisions in the current permit.	No	The bagfilter replacement does not alter (modify or add to) any existing monitoring, reporting or recordkeeping provisions in the current permit.
This change does not require a change to an existing permit term that was taken to avoid an applicable requirement. (e.g. PSD avoidance condition)	No	The bagfilter replacement does not require a change to an existing permit term that was taken to avoid an applicable requirement. (e.g. PSD avoidance condition)
This change does not require a permit under the NC Toxics program.	No	The bagfilters are control system to collect particulate from woodworking operations. The bagfilter replacement does not require a permit under the NC Toxics program

Based on the above analysis, DAQ concurs that the above discussed bagfilter replacements qualify as 502(b)(10) change. The Division of Air Quality (DAQ) has reviewed and accepted the facility's requests. The updates have been implemented into the new proposed Title V Air Permit No. 08804T14.

II. Facility Description

The MasterBrand Cabinets LLC – Kinston Plant #9 (MasterBrand) located in Kinston, Lenoir County, North Carolina, (Standard Industrial Classification [SIC] Code 2434 – wood kitchen cabinets) is a facility which produces wood cabinets. MasterBrand receives unfinished, pre-cut wood products (particle board, Hickory, Maple, Oak, Cherry, etc., but no pine) and produces fine cabinets. All their products are purchased by special order. The facility operates typically with one shift (8 -11 hours), 5-6 days per week. Roughly 90% of the time they operate five days per week as opposed to six. They have a cutting area where the pieces are made, and painting/coating areas where the pieces are hung on racks and travel throughout the facility through a series of spray booths and ovens. Randall Jones of the DAQ Washington Regional Office (WaRO) completed the most recent compliance inspection of the facility September 5, 2024 and the facility was determined in compliance with permit conditions and applicable regulations at the time of the inspection. Mr. Jones' inspection report is forthcoming and has not been uploaded onto Laserfiche file system. Yongcheng Chen of the Washington Regional Office (WaRO) completed the previous annual compliance inspection of the facility on June 29, 2023. References to the findings and observations contained in Mr. Yongcheng Chen's inspection report was made in this review as applicable.

The facility is a Title V facility because the pre-control potential emissions of VOC and PM_{10} exceed 100 tons/year threshold(s), respectively.

III. History/Background/Application Chronology

History/Background

December 12, 2017 – Permit No. **08804T12** issued as a Title V renewal.

September 9, 2020 – Permit No. **08804T13** issued as a Title V one-step Significant Modification for modifying the particulate emissions limits from 518,846 pounds to 5,764,957 pounds per consecutive 12-month period.

Application Chronology

June 3, 2022 – DAQ received Permit Application **5400187.22A**, as a Title V renewal. The application was deemed complete for processing.

May 22, 2023 – Received an Air Permit 502(b)(10) notification (5400187.23A) to install two new Torit 376-RFW-10 Dust Collectors (ID Nos. BH-4 and BH-5) which will replace existing bagfilters BH-4 in series with cyclone CY-1 and BH-5.

June 5, 2023 – David B. Hughes (NCDAQ) permitting section sent out a 502(b)(10) Notification Acknowledgement letter. The replacement of equipment will be implemented at the next permit action.

June 29, 2023 – Yongcheng Chen of the Washington Regional Office (WaRO) completed the annual compliance inspection of the facility.

September 28, 2023 – Technical additional information request was sent via email by David B. Hughes to Mr. Scotty Kelly, Facility & Technical Contact, EHS Specialist of The MasterBrand Cabinets LLC – Kinston Plant #9, regarding submission of some applicable forms required for this permit renewal application.

December 21, 2023 – Mr. David B. Hughes sent a follow-up email to Mr. Kelly.

January 26, 2024 – Per Mr. Kelly's request, David B. Hughes emailed him the link of downloading the application forms.

April 9, 2024 – This permit renewal application along with the Air Permit 502(b)(10) Applicability Determination Request received on May 22, 2023, was reassigned to Mr. Chengqing Xiao, (NCDAQ) permitting section.

April 15, 2024 – Mr. Chengqing Xiao sent a follow-up email to Mr. Kelly regarding the required application forms (B, B4, C1, D1, D2A, D4 and D5).

May 20, 2024 – Emailed Mr. Kelly as a follow-up requesting an update for the required application forms.

May 28, 2024 – Mr. Alex Tomash, Environmental Director of MasterBrand Cabinets LLC sent an email requesting a Microsoft Teams conference call meeting.

May 30, 2024 – The facility (Mr. Scotty Keelly, ESH Kinston, Mr. Alex Tomash, and Ms. Sally Gaines), Ms. Maria Amigo of WSP Consulting and Mr. Chengqing Xiao of NC DAQ had a conference call meeting and discussed the forms requested by DAQ

June 5, 2024 – Emailed Mr. Kelly and Ms. Amigo indicating that B, B4 and D1 forms were required for this Title V renewal/modification application.

June 27, 2024 – Mr. Kelly emailed the requested application forms including form B, B4, C1, D1, D4, and D5. In addition, the Torit 376-FRW-10 dust collector schematics, literature, and control efficiency documentation was emailed.

July 3, 2024 – Emailed Mr. Kelly regarding whether the facility emits 1-bromopropane (CAS 106-94-5) which was added to the HAP list by EPA on January 5, 2022.

July 8, 2024 – Received an email from Mr. Kelly stated that "We do not emit any 1-bromopropane (CAS 106-94-5)."

July 9, 2024 – Received the hardcopies of the above requested application forms.

July 12, 2024 – Emailed Mr. Kelly requesting to verify and correct the VOC emissions rates, complete the Potential Emissions rates (Before Controls) on Form D1 for NOx, CO and SO_2, and estimate the uncontrolled PM emissions rates on Form D1.

July 25, 2024 – Received the email with the revised Form D1 from Ms. Amigo.

August 18 &19, 2024 – Emailed Mr. Kelly to verify source description for the permitted the diesel-fired generator (ID No. ES-PS); received email from Mr. Kelly indicating that "The generator is a peak shaving generator only and does not supply electricity to our facility. It is used by the City of Kinston."

August 22, 2024 – Emailed Mr. Kelly requesting technical additional information (1) the pressure drop ranges filled out on the Form C1 were incorrect in according to the modification request for bagfilters BH-1 through BH-5 submitted in the Title V permit renewal/modification application; (2) whether the facility have any contact adhesive operations.

August 25, 2024 – Received the two corrected Forms C1 for bagfilters BH-4 and BH-5 via email from Ms. Amigo.

September 4, 2024 – Phone discussion with Mr. Kelly regarding Contact Adhesive Operations; Mr. Kelly made the statement via email that "Our facility does not have a process that uses contact adhesion. We have a laminator that puts paper on the wood but do not have a contact adhesion process."

September 5, 2024 – Randall Jones of the Washington Regional Office (WaRO) completed the compliance inspection of the facility.

September 25, 2024 – Emailed Mr. Kelly inquiring whether the facility uses any chemicals (coating, paint etc.) containing/emitting any fluorinated compounds (PFAS).

October 1, 2024 – Mr. Kelly stated via an email that "In regard to your email about PFAS in our finishing materials, we do not use or emit any PFAS in our finish materials."

October 9, 2024 – DRAFT permit sent to Permittee, DAQ WaRO, and DAQ Technical Service Section for comment.

October 10 & 11, 2024 – Betsy Huddleston (DAQ WaRO) provided comments on the draft permit and review on October 10, 2024, Samir Parekh (DAQ Technical Service Section) provided comments pertaining to CAM on October11**,** 2024.

October 16, 2024 – Mr. Kelly requested an additional week to further review the permit draft via an email.

October 24, 2024 – Mr. Kelly sent an email requesting another additional week to review the permit draft; Ms. Gaines, environmental Manager of MasterBrand Cabinets LLC, emailed a few her review comments and the information of facility name change.

October 28, 2024 – Emailed Mr. Kelly requesting the facility to resubmit a Form A to reflect the name change

October 31, 2024 – Mr. Kelly emailed a revised Form A with the facility name change request

November 1, 2024 – Phone discussion with Ms. Gaines including (1) the facility needs to finish the permit draft review by November 5, 2024, (2) the facility may use a small amount of contact adhesive for maintenance and Ms. Gaines would provide brief information about it to let DAQ evaluate whether it is a product process operation.

November 4, 2024 – A 502(b)(10) Notification (Appl. ID# 5400187.24B) submitted from MasterBrand Cabinets LLC – Kinston Plant #9 was received by NC DAQ. The facility requested to replace the existing bagfilter (BH-2 and BH-3) with one new Torit 484-RF-12 Dust Collector (BH-3) with the proposed operational date in May 2025; this permit engineer emailed Mr. Kelly requesting Form C1 for the new baghouse (BH-3) and Form D5 with PE seal.

November 5, 2024 – Ms. Sally Gaines (MasterBrand) provided review comments on draft permit via e-mail, indicating that the facility are currently using contact adhesives in the repair of cabinet parts that do not pass quality standards."

November 7, 2024 – The TV-Administrative Name Change application for MasterBrand Cabinets LLC - Kinston Plant #9 (Appl. ID# 5400187.24A) was received by DAQ; emailed Ms. Gaines in response to her comments regarding contact adhesive being used for repair of cabinet parts.

November 7, 2024 – Randall Jones (DAQ WaRO) provided comments on the draft permit.

November 8, 2024 – Received the hard copies of the requested Form C1 for the new baghouse (BH-3) and Form D5 with PE seal.

November 14, 2024 – Phone conversation with Mr. Kelly to discuss the information regarding the replacement of bagfilters (BH-2 and BH-3) with one new Torit 484-RF-12 Dust Collector (BH-3), Mr. Kelly confirmed via email that it does not need to revise CAM parameters for replacing the bagfilters (BH-2 and BH-3) with one new Torit 484-RF-12 Dust Collector (BH-3).

November 19, 2024 – A 502(b)(10) Notification Acknowledgement letter was emailed to the facility.

November 21, 2024 – DRAFT permit sent to Permittee, DAQ WaRO, and DAQ Technical Service Section for the 2nd round of permit review.

November 25, 2024 – Samir Parekh (DAQ Technical Service Section) replied via email that he has no comments for the 2nd round permit draft review.

November 25, 2024 – Ms. Gaines sent an email requesting an extension to December 6th for the permit review; sent an email to Ms. Gaines to approve the extension.

December 6, 2024 – Ms. Gaines emailed the 2nd round of permit review comments. DAQ WaRO did not send any comments.

December 13, 2024 – Draft permit and review sent to 30-day public comment and 45-day EPA review periods.

December xx, 2024 – Mark Cuilla/Connie Horne (DAQ) verified TVEE.

January 11, 2025 – 30-day public comment period ended; comments received.

January 26, 2025 – 45-day EPA Review period ended; comments received.

Month XX, 2025 – Air Permit No. **08804T14** issued as a Title V permit.

IV. Permit Modifications/Changes and TVEE Discussion

The following table provides a summary of the changes to the current permit as part of the renewal process. This summary is not meant to be an exact accounting of each change but a summary of those changes.

Page No.	Section	Description of Changes
Global	Global	-Updated the application number and complete date. -Updated permit revision number to T14. -Updated the issuance/effective dates to permit.
Cover Letter	Cover Letter	-Updated PSD increment tracking statement.
3	List of Acronyms	-Moved List of Acronyms from end of permit.
4	Section 1 Equipment Table	As requested in application 5400187.23A -Replaced existing bagfilter (ID No. BH-4, 5,477 ft^2 of filter area) with new bagfilter (ID No. BH-4, 4,891 ft^2 of filter area). -Replaced existing bagfilter (ID No. BH-5, 4,350 ft^2 of filter area) with new bagfilter (ID No. BH-5, 4,891 ft^2 of filter area). -Removed cyclone (ID No. CY-1). As requested in application 5400187.24B -Replaced existing bagfilters (ID Nos. BH-2, 5,684 ft^2 and BH-3, 5,648 ft^2 of filter area) with one new bagfilter (ID No. BH-3, 7,502 ft^2 of filter area).
4	Section 1 Equipment Table	-Removed "emergency and" in the Emission Source Description for the source (ID No. ES-PS). - Added emission source (ID No. ES-RS) with a description "Adhesive application stations for product repair"
6	Section 2.1 A.2	- Added 15A NCAC 02D .0516
8	Section 2.1 B.2.c	-Updated monitoring language from Permit Shell to include establish "normal" for these sources (ID Nos. ES-WO1 through ES-WO3) in the first 30 days following initial operation of these control devices (ID Nos. BH-3, BH-4 and BH-5) after the issuance of Permit No. 08804T14 under NCAC 02D .0521.
9	Section 2.1 B.3.c	-Changed an excursion defined as a pressure drop greater than 5.0" H_2O or less than 0.5" H_2O to an excursion defined as a pressure drop greater than 8.0" H_2O or less than 0.5" H_2O for bagfilters (ID Nos. BH-1, BH-3 through BH-5) for 15A NCAC 02D .0614: Compliance Assurance Monitoring (CAM).
9	Section 2.1 B.3.c	-Removed Recordkeeping and reporting [40 CFR 64.9] contents in the table
10	Section 2.1 B.3.c Section 2.1 B.3.d	- Revised "The gauge has an indicator range from 0.0 to 10.0 inches of water and has an accuracy of plus or minus 2 percent of full scale, and 70°F" to "The gauge has an indicator range from 0.0 to 10.0 inches of water and has an accuracy of plus or minus 2 percent of full scale at 70°F" - Changed Recordkeeping and Reporting requirements to current regulatory language
11 - 15	Section 2.1 D.4	-Changed MACT ZZZZ to current regulatory language
14	Section 2.1 D.4.l.ii	-Added electronic reporting requirements
16 - 19	Section 2.1 E.3	-Changed MACT ZZZZ to current regulatory language
17	Section 2.1 E.3.g	-Clarifications to the Oil Change and Inspection Requirement in NESHAP Subpart ZZZZ
18	Section 2.1 E.3.p.iii	-Added electronic reporting requirements

Page No.	Section	Description of Changes
23	Section 2.2 A.2.c Section 2.2 A.2.d.i	- Revised "the Permittee shall comply with the following for all the sources listed in Table 2.2.A." to "the Permittee shall comply with the following for the sources **(ID Nos. SBB1 through SBB20).** - Revised "the monthly VOC emissions from the sources listed in Table 2.2.A for the previous 17 months." to "the monthly VOC emissions from the sources **(ID Nos. SBB1 through SBB20)** for the previous 17 months."
24	Section 2.2 B.1	-Added "and drying ovens **(ID Nos. OVGA1 through OVGA4 and OVGB1 and OVGB2)**"
26	Section 2.2 B.8	-Removed "by **November 21, 2014** and thereafter."
26 - 27	Section 2.2 B.9.a through e	-Added Contact Adhesive Operations
28	Section 3 Insignificant Activities	-Moved Insignificant Activities list and removed footnote 3. -Added emission source (ID No. IES11) Parts washer.
29 - 36	Section 4 General Conditions	-Updated General Conditions (v8.0, 07/10/2024).

There were updates to the equipment descriptions made in Title V Equipment Editor (TVEE).

V. Regulatory Review

The facility is currently subject to the following regulations:

15A NCAC 02D .0512, "Particulates from Wood Products Finishing Plants"
15A NCAC 02D .0516, "Sulfur Dioxide Emissions from Combustion Sources"
15A NCAC 02D .0521, "Control of Visible Emissions"
15A NCAC 02D .0530, "Prevention of Significant Deterioration"
15A NCAC 02D .0614, "Compliance Assurance Monitoring"
15A NCAC 02D .1111, "Maximum Achievable Control Technology (40 CFR 63, Subparts JJ and ZZZZ)"
15A NCAC 02D .1806, "Control and Prohibition of Odorous Emissions" ***(State-Enforceable Only)***
15A NCAC 02Q .0317, "Avoidance Conditions" (for 15A NCAC 2D .0530, Prevention of Significant Deterioration)

A. Conventional Cabinet Finishing Operations (ID No. CF1) with associated dry filter-type spray booths (ID Nos. SBA1 through SBA16 and SBA25) and four natural gas-fired drying ovens (ID Nos. OVGA1 through OVGA4);
High Volume Line Cabinet Finishing Operations (ID No. CF2) with associated dry filter-type spray booths (ID Nos. SBB1 through SBB20) and two natural gas-fired drying ovens (ID Nos. OVGB1 and OVGB2)

1. 15A NCAC 02D .0512 – Particulates from Miscellaneous Wood Products Finishing Plants

The facility shall not cause, allow, or permit particulate matter caused by the working, sanding, or finishing of wood to be discharged from any stack vent, or building into the atmosphere without providing adequate duct work and properly designed collectors as set by 15A NCAC 02D .0512.

Monitoring/Recordkeeping/Reporting Requirements

MasterBrand is required to perform inspections of the filters and ductwork. At a minimum, the inspections will include weekly inspection of the spray booth's filters noting the condition, and annual (for each 12-month period following the initial inspection) inspection of the system ductwork noting structural integrity. The results of inspection and maintenance for the spray booths must be maintained in a logbook (written or electronic) on-site and made available to an authorized representative upon request. The logbook shall record the following:

(1) the date and time of each recorded action;
(2) the results of each inspection; and

(3) the results of maintenance performed on any filters.

MasterBrand is also required to submit a semiannual summary report of the inspections.

According to Mr. Chen's inspection report of compliance inspection conducted on June 29, 2023, "The booth filters are inspected by the operators daily. In addition to the daily spray booth logs, Masterbrand staff performs the monthly duct inspection along with the visible emissions observation." and "… I reviewed the records back to the date of last inspection." According to the IBEAM records, the most recent semi-annually report of inspection/maintenance and visible emissions monitoring summary for booth filters and woodworking baghouses. was received by WaRO on 8/02/2024 (postmarked 7/30/2024) and reviewed by Randall Jones on 8/23/2024 with compliance conclusion. Continued compliance is expected.

2. 15A NCAC 02D .0516 – Sulfur Dioxide Emissions from Combustion Sources

The rule states that SO_2 emissions from any combustion source that are discharged through a vent, stack or chimney shall not exceed 2.3 lb SO_2/MMBtu input; basically it mandates the fuel-type allowed (i.e., the emission rate) and does not mandate the amount of use (i.e., the total emissions produced). Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard. The natural gas-fired drying ovens **(ID Nos. OVGA1 through OVGA4 and OVGB1 and OVGB2)** are subject to this rule.

In order to calculate SO_2 emissions from the combustion of natural gas, the emission factors published by EPA in AP-42 can be applied. For the purposes of calculating SO2 emissions, the emission factors for natural gas-fired boilers can be applied to these natural gas-fired ovens. The published emission factors are not in units of pounds per million Btu, so the emission factor must be converted:

SO_2 from natural gas burned in a boiler (AP-42 Chapter 1.4, Table 1.4-2; SO_2):

$$\frac{0.6\text{ lb}}{\text{million scf}} \times \frac{1\text{ scf}}{1{,}020\text{ Btu}} = \frac{\mathbf{0.001\text{ lb}}}{\mathbf{\text{million Btu}}}$$

Therefore, natural gas combustion sources are expected to comply with the SO_2 limit by a wide margin. DAQ has previously neglected to include a condition for 02D .0516 in the permit. DAQ will fix that oversight with this Title V permit renewal revision. Due to the wide margin of compliance, DAQ will not require any specific monitoring, recordkeeping, or reporting for 02D .0516.

3. 15A NCAC 02D .0521 – Control of Visible Emissions

The spray booths **(ID Nos. SBA1 through SBA16, SBA25, and SBB1 through SBB20)** are limited to an opacity of 20%. Visible emissions (VE) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

To ensure compliance, once a month the Permittee shall observe the emission points of these sources **(ID Nos. SBA1 through SBA16, SBA25, and SBB1 through SBB20)** for any visible emissions above normal. The facility is required to observe emission points monthly and record the observations in a logbook. The facility will be deemed in noncompliance if the required monthly observations are not conducted as required; if the above-normal emissions are not corrected within the monitoring period or the percent opacity demonstration cannot be made. They are also required to submit a semiannual summary report of the observations.

According to the last inspection report, "Masterbrand staff performs the monthly visible emissions observations on the roof of the facility. These records were complete, and no VE problems were recorded." According to the IBEAM records, the most recent semi-annual report of inspection/maintenance and visible emissions monitoring for booth filters and woodworking baghouses was received by WaRO on 8/02/2024 (postmarked 7/30/2024) and reviewed by Randall Jones on 8/23/2024 with compliance conclusion. Continued compliance is expected.

3. 15A NCAC 02D .0530 – Prevention of Significant Deterioration

The PSD program regulates emissions from major stationary sources of regulated air pollutants. For the purposes of the PSD program, a major stationary source is defined as any one of the following;

1. *Any stationary source that is listed as one of the 28 named source categories in Title 40 of the Code of Federal Regulations (40 CFR), Part 51.166(b)(1)(i) which emits, or has the potential to emit, 100 tons per year (tpy) or more of any pollutant subject to regulation under the ACT;*
2. *Any stationary source that is not listed as one of the 28 named source categories in 40 CFR Part 51.166(b)(1)(i) which emits, or has the potential to emit, 250 tons per year (TPY) or more of any pollutant subject to regulation under the ACT.*

This facility is a furniture manufacturing facility, which is not one of the 28 named source categories. Therefore, the threshold for PSD is 250 tpy.

The High Volume Line Cabinet Finishing Operations **(ID No. CF2)** with associated dry filter-type spray booths **(ID Nos. SBB1 through SBB20)** are subject to 15A NCAC 02D .0530 *Prevention of Significant Deterioration*. Volatile organic compound (VOC) emissions from high volume line paint booths SBB1 through SBB20 shall be less than 620 tons per consecutive 12-month period. The following BACT limits apply:

Affected Sources	BACT Limit
Toner spray booths	7.17 pounds of VOC per gallon applied coating
Stain spray booths	6.39 pounds of VOC per gallon applied coating
Pre-seal spray booths	5.73 pounds of VOC per gallon applied coating
Sealer spray booths	5.73 pounds of VOC per gallon applied coating
Topcoat spray booths	5.73 pounds of VOC per gallon applied coating

Monitoring/Recordkeeping/Reporting Requirements

- Calculations of VOC emissions per month shall be made at the end of each month. VOC emissions shall be determined by multiplying the total amount of each type of VOC-containing material consumed during the month by the VOC content of the material. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the amounts of VOC-containing materials or the VOC emissions are not monitored and recorded.
- Submit semi-annual reports containing the monthly VOC emissions from spray booths (ID Nos. SBB1 through SBB20) for previous 17 months, and the highest VOC content of coating per gallon applied over the calendar year for each of the spray booths.

The facility's semi-annual report received on January 29, 2024, the facility documented consecutive 12 months rolling total VOC and indicated the highest consecutive 12 months rolling total VOC emissions rates from January through December 2023 were 132.4 tons. The most recent semi-annual VOC emissions report was received on August 2, 2024. The semi-annual reports were reviewed by Randall Jones of DAQ Washington Regional Office (WaRO) and appeared to show compliance.

4. 15A NCAC 02D .1111 – Maximum Achievable Control Technology (40 CFR Part 63, Subpart JJ – National Emission Standards for Hazardous Air Pollutants for Wood Furniture Manufacturing Operations

See discussions under Section VI. NESHAPS/MACT for more details.

5. 15A NCAC 02Q .0317 – Avoidance Condition for 15A NCAC 02D .0530: Prevention of Significant Deterioration

In order to avoid PSD all of the paint booths must emit less than 25 tons of particulate matter (PM) per consecutive 12-month period and less than 15 tons of PM_{10} per consecutive 12-month period. This facility has been avoiding PSD for PM/PM_{10} since the 08804R02 permit was issued on September5, 2001 (WaRO has copies of permits and reviews back to R00). and the limit was modified as part of the 08804/T13 permit revision issued September 9, 2020. To ensure compliance, the total weight of solids applied in the paint booths shall not exceed **5,764,957 pounds** per consecutive 12-month period. The permit requires monthly PM and PM_{10} calculations based on the total

volume of solids applied in each cabinet finishing line as well as recordkeeping and semiannual reporting requirements.

MasterBrand's documented in the report received by DAQ on February 1, 2024 that the highest 12-month total weight of solids applied in the paint booths in 2023 was 382,409 pounds, below the permitted limit stated above.

Monitoring/Recordkeeping/Reporting Requirements

MasterBrand must keep monthly records of the total weight of solids applied in the paint booths. MasterBrand is required to submit a summary report semi-annually, containing the following items:

- The monthly particulate matter and PM_{10} emissions for the previous 17 months. The emissions must be calculated for each of the 12-month periods over the previous 17 months.
- The monthly amount of solids applied to the paint booths for the previous 17 months.

The most recent semi-annual report of PSD Avoidance received on August 2, 2024 was reviewed by Randall Jones with compliance conclusion in DAQ IBEAM. Continued compliance is expected.

B. Woodworking operations (ID No. ES-WO1),
Woodworking operations for the high volume line (ID No. ES-WO2), and
Saws (ID No. ES-WO3) with associated bagfilters (ID Nos. BH-1 through BH-8)

1. 15A NCAC 02D .0512 – Particulates from Miscellaneous Wood Products Finishing Plants

This rule requires adequate ductwork and properly designed collectors on woodworking processes. Particulate emissions from woodworking operations (ID Nos. ES-WO1, ES-WO2, and ES-WO3) throughout the facility are controlled by eight bagfilters installed in parallel (ID Nos. BH-1 through BH-8). Per an Air Permit 502(b)(10) change notification received by DAQ on May 22, 2023, the facility requested to replace the existing bagfilter (ID No. BH-4 (5,477 ft2)) in series with cyclone (ID No. CY-1) and bagfilter BH-5 (4,350 ft2)) with two new bagfilters -Torit 376-RFW-10 Dust Collectors (ID Nos. BH-4 and BH-5, respectively). Per this reviewer's request, the facility submitted the Torit 376-FRW-10 dust collector schematics, literature, and control efficiency on July 9, 2024. indicating that the Torit RF bag house dust collection equipment has an efficiency of 99.99% at 1 micron particle size.

Control Device Evaluation (Control Device IDs: BH-3, BH-4, and BH-5)
Specifications for the proposed bagfilters (BH-3, BH-4, and BH-5) as entered by this facility on the permit application C1 form are summarized in the table below. The DAQ Bagfilter Evaluation Spreadsheet (See Attachment 2) predicts an overall control efficiency of 99.84%. The proposed filtering velocity does not exceed the typical velocity for wood dust (as listed in the DAQ bagfilter evaluation spreadsheet).

As required by 2Q .0112, a Form D5 for the proposed bagfilters (BH-4 and BH-5) was received on July 9, 2024. Mr. Sean Mulligan, P.E., of WSP USA Environment Infrastructure, Inc., who is currently licensed with the North Carolina Board of Examiners for Engineers and Surveyors (Seal # 022147), sealed the Form D5, certifying all application pages. A Form D5 for the proposed bagfilters (BH-3) was received on November 8, 2024. Christy T. Richardson of ERM, P.E., who is currently licensed with the North Carolina Board of Examiners for Engineers and Surveyors (Seal # 046390), sealed the Form D5, certifying all application pages.

Control Device ID	BH-3	BH-4	BH-5
Material Controlled	Wood dust	Wood dust	Wood dust
Type	Bagfilter	Bagfilter	Bagfilter
Surface Area, (ft^2)	7,502	4,891	4,891
Inlet Air Flow Rate, acfm	70,000	40,091	40,091
Control Efficiency	99.84%	99.84%	99.84%
Applicant Filtering Velocity, (ft/min)	12.0	12.0	12.0
Typical Filtering Velocity, (ft/min)	9.3	8.2	8.2

Control Device ID	BH-3	BH-4	BH-5
Cleaning Method	Air Pulse	Air Pulse	Air Pulse
Fabric	Polyethylene	Felted	Felted
Inlet Temperature (°F)	100	100	100
Maximum Filter Operating Temp (°F)	100	100	100

Monitoring/Recordkeeping/Reporting Requirements

The permittee is required to perform inspections of the bagfilters and ductwork as recommended by the manufacturer. At a minimum, the inspections will include monthly external inspection on the bagfilters and ductwork noting the structural integrity, and an annual internal inspection of the bagfilters noting structural integrity and condition of the bagfilters.

Based on the last compliance inspection report dated July 13, 2023, "The monthly inspections are detailed enough to count as an annual internal inspection, they actually show up as annual inspections on their work orders. External inspections are performed daily with their pressure drop checks." Compliance was indicated and continued compliance is expected.

2. 15A NCAC 02D .0521 – Control of Visible Emissions

Visible emissions from these sources **(ID Nos. ES-WO1, ES-WO2, and ES-WO3)** are limited to an opacity of 20%. Visible emissions (VE) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

To ensure compliance, once a week the Permittee shall observe the emission points of these sources **(ID Nos. ES-WO1, ES-WO2, and ES-WO3)** for any visible emissions above normal. The weekly observations must be made for each week of the calendar year period to ensure compliance. The Permittee shall establish "normal" for these sources **(ID Nos. ES-WO1 through ES-WO3)** in the first 30 days following initial operation of these control devices **(ID Nos. BH-3, BH-4 and BH-5)** after the issuance of Permit No. 08804T14. The facility is required to observe emission points weekly and record the observations in a logbook. The facility will be deemed in noncompliance if the required weekly observations are not conducted as required; if the above-normal emissions are not corrected within the monitoring period or the percent opacity demonstration cannot be made; or if "normal" is not established for these sources **(ID Nos. ES-WO1 through ES-WO3)** in the first 30 days following initial operation of these control devices **(ID Nos. BH-3, BH-4 and BH-5)** after the issuance of Permit No. 08804T14. The facility is also required to submit a semi-annual summary report of the observations.

According to the last inspection report, "MBCI maintenance staff perform daily VE observations. They watch the bagfilter exhausts for six minutes each day and record their observations. The VE readings are done with their daily pressure drop checks." According to the IBEAM records, the most recent semi-annually report of inspection/maintenance and visible emissions monitoring summary for booth filters and woodworking baghouses. was received by WaRO on 2/1/2024 and reviewed with compliance conclusion by Connelly Huter of DAQ WaRO on 4/1/2024. Continued compliance is expected.

3. 15A NCAC 02D .0614 – Compliance Assurance Monitoring

CAM is required for all sources subject to an emission limit that employs the use of a control device in order to comply with that limit and whose potential pre-control emissions are greater than major source thresholds. The woodworking operations and saws **(ID Nos. ES-WO1 through ES-WO3)** could potentially emit more than 100 tons/year PM10 (before control) and therefore, are subject to the CAM regulation. The new bagfilters **(ID Nos. BH-4 and BH-5)** replacing the existing bagfilters **(ID Nos. BH-4 and BH-5)** and the associated cyclone **(ID No. CY-1)**, and the new bagfilter **(ID No. BH-3)** replacing the existing bagfilters **(ID Nos. BH-2 and BH-3)** meet this applicability, respectively. The new control devices **(ID Nos. BH-3, BH-4 and BH-5)** will be subject to the same requirements as the existing equipment.

MasterBrand must perform the following monitoring/recordkeeping/reporting on the bagfilters **(ID Nos. BH-1, BH-3 through BH-8)**. As previously discussed, in this Title V permit renewal/modification application (5400187.22A), MasterBrand requested to modify the acceptable indicator range for bagfilters (ID Nos. BH-1 through BH-5) from the current range of 0.5" H_2O to 5.0" H_2O to the proposed range of 0.5" H_2O to 8.0" H_2O. No changes are requested for the indicator ranges for bagfilters (ID Nos. BH-6 through BH-8). As previously discussed, MasterBrand submitted another 502(b)(10) Notification received by DAQ on 11/04/2024 requested to replace the existing bagfilters (BH-2 and BH-3) with one new Torit 484-RF-12 Dust Collector (ID: BH-3). Confirmed by Mr. Kelly's 11/14/2024 email, the facility requested to implement the proposed indicator range of 0.5" H_2O to 8.0" H_2O for bagfilters (ID Nos. BH-1, BH-3 through BH-5) after these bagfilter replacements.

The Indicator Range in the Permit Condition 2.1 B.3.c for bagfilters **(ID Nos. BH-1 through BH-5)** have been changed.

Indicator	Pressure drop
Measurement Approach [40 CFR 64.6(c)(1)(ii)]	Pressure drop (ΔP) across the bagfilter is measured with a differential pressure gauge
Indicator Range [40 CFR 64.6(c)(2)]	An excursion is defined as a pressure drop greater than 8.0" H_2O or less than 0.5" H_2O. **(ID Nos. BH-1, BH-3 through BH-5)**
Indicator Range [40 CFR 64.6(c)(2)]	An excursion is defined as a pressure drop greater than 5.0" H_2O or less than 0.5" H_2O. **(ID Nos. BH-6 through BH-8)**
Bypass [40 CFR 64.3(a)(2)]	If the pressure drop falls below 0.5" H_2O, the possibility of bypass is investigated
QIP threshold [40 CFR 64.8]	Instantaneous ΔP readings outside range 3 times within a six-month period
Performance Criteria, Data Representativeness [40 CFR 64.6(c)(1)(iii)]	Pressure taps are located at the bagfilter inlet and outlet. The gauge has an indicator range from 0.0 to 10.0 inches of water and has an accuracy of plus or minus 2 percent of full scale at 70°F. The actual temperature of the monitored exhaust will vary depending on seasonal changes
Verification of Operational Status [40 CFR 64.3(b)(1)]	N/A
QA/QC Practices and Criteria [40 CFR 64.3(b)(3)]	The pressure gauge is calibrated semi-annually. Pressure taps are checked for plugging daily.
Monitoring frequency [40 CFR 64.3(b)(4)]	ΔP is monitored continuously while the emission units are in operation.
Data collection procedure [40 CFR 64.3(b)(4)]	ΔP is manually recorded daily.
Averaging period	N/A

MasterBrand shall submit a summary report of monitoring and recordkeeping activities as stated in the Section 2.3.c through d in the permit No. 08804T14 postmarked on or before January 30 of each calendar year for the proceeding six-month period between July and December and July 30 of each calendar year for the proceeding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

According to IBEAM record, the most recent CAM report (VE, I&M and pressure drop logs) was received on July 31, 2024 and review by Randall Jones of DAQ WaRO on August 21, 2024 with compliance conclusion. Continued compliance is anticipated.

C. Laminator (ID No. ES3D)

1. 15A NCAC 02D .1806 – Control and Prohibition of Odorous Emissions ***(State-enforceable only)***

See discussion for more details under Section V. F Facility-Wide 15A NCAC 02D .1806 – Control and Prohibition of Odorous Emissions ***(State-enforceable only)***.

D. One diesel-fired peak shaving generator (ID No. ES-PS)

The MasterBrand has one diesel-fired peak shaving generator (ID No. ES-PS) at the site. The generator was purchased in 2000, so it is considered an "existing source." Per Mr. Kelly's email received on August 19, 2024, "The generator is a peak shaving generator only and does not supply electricity to our facility. It is used by the City of Kinston." The word "emergency" was removed from the Emissions Source Description table for this source (ID No. ES-PS) with this Title V renewal/modification revision.

1. 15A NCAC 02D .0516 – Sulfur Dioxide Emissions from Combustion Sources

The rule states that SO_2 emissions from any combustion source that are discharged through a vent, stack or chimney shall not exceed 2.3 lb SO_2/MMBtu input; basically it mandates the fuel-type allowed (i.e., the emission rate) and does not mandate the amount of use (i.e., the total emissions produced). Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard.

According to the previous Title V permit modification review T13 dated April 27, 2020 by Kurt Tidd, "The facility only uses Ultra Low Sulfur Diesel (ULSD) which is documented by fuel receipts." Therefore, emissions of sulfur dioxide from the diesel-fired peak shaving generator **(ID No. ES-PS, 1,447 HP)** is expected to emit SO_2 at a rate of 0.0015 lb/ MMBtu using the emission factor for combusting diesel fuel in a large internal combustion engine (>600HP) published in Section 3.4 of AP-42 (revised October 1996) and assuming a fuel sulfur content of 0.0015% by weight of Ultra Low Sulfur Diesel (ULSD). Compliance is demonstrated for this generator (ID No. ES-PS).

No monitoring, recordkeeping, or reporting is required for sulfur dioxide emissions from firing Ultra Low Sulfur Diesel (ULSD) fuel in this source. Continued compliance is expected.

2. 15A NCAC 02D .0521 – Control of Visible Emissions

Visible emissions from this source **(ID No. ES-PS)** are limited to an opacity of 20%. Visible emissions (VE) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

The emissions of PM (visible emissions) are low for the engine firing Ultra Low Sulfur Diesel (ULSD) fuel. There are no monitoring/recordkeeping/reporting requirements under this rule. Continued compliance is expected.

3. 15A NCAC 02D .1111 – Maximum Achievable Control Technology (40 CFR Part 63, Subpart ZZZZ) – National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

The MACT standard for stationary reciprocating internal combustion engines (RICE) was first promulgated on June 15, 2004, and only regulated existing and new stationary RICE at major sources of HAP with a site rating > 500 brake horsepower (hp). On February 17, 2010, EPA finalized the newest portions of the RICE NESHAP. Under these new regulations, many previously unregulated engines, including those designated for emergency

use, became subject to federal regulations, including emissions standards, control requirements, or management practices.

A stationary RICE is "existing" if it commenced construction or reconstruction before December 19, 2002, for RICE with a site rating of > 500 hp located at a major source of HAP. A stationary RICE is "existing" if it commenced construction or reconstruction before June 12, 2006, for RICE with a site rating of < 500 hp located at a major source of HAP.

The diesel-fired peak shaving generator (ID No. ES-PS) as an existing source is subject to 40 CFR Part 63, Subpart ZZZZ.

Notifications [40 CFR 63.6645(a)(2)]
The Permittee shall submit all of the notifications in the following regulations that apply by the dates specified:

i. (A) 40 CFR 63.7(b) [*performance testing*] and (c) [*quality assurance program*];

(B) 40 CFR 63.8(e) [*performance evaluation of CPMS*], (f)(4) and (f)(6) [*alternative monitoring methods*]; and

(C) 40 CFR 63.9(b) through (e), and (g) and (h) [*initial notifications*].

ii. The Permittee shall submit a Notification of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin as required in 40 CFR 63.7(b)(1). [40 CFR 63.6645(g)]

iii. For each performance test, the Permittee shall submit a Notification of Compliance Status, including the performance test results, before the close of business on the 60th day following the completion of the performance test according to 40 CFR 63.9(h)(2)(ii) and 63.10(d)(2). [40 CFR 63.6630(c), 63.6645(h)]

Fuel Requirements [15A NCAC 2Q .0508(f)]
The Permittee shall use diesel fuel in the engine with:

i. a maximum sulfur content of 15 ppm; and
ii. a minimum cetane index of 40 or a maximum aromatic content of 35 volume percent.

[40 CFR 63.6604(a) and 40 CFR 80.510(b)]
As previously discussed under 15A NCAC 02D .0516, the facility only uses Ultra Low Sulfur Diesel (ULSD) which is documented by fuel receipts.

Emissions and Operating Limitations [15A NCAC 2Q .0508(b)]
The Permittee shall:

i. limit concentration of CO in the stationary RICE exhaust to 23 ppmvd at 15 percent O_2; or
ii. reduce CO emissions by 70 percent or more, using an oxidation catalyst.

[40 CFR 63.6600(d), Table 2c, Table 2b]

Testing Requirements [15A NCAC 2Q .0508(b)]

i. The Permittee shall conduct initial and subsequent performance tests to demonstrate compliance with the limitations in the Emissions and Operating Limitations. [40 CFR 63.6620(a)]
ii. The Permittee conducted its initial performance test on February 10, 2014 according to the provisions in 40 CFR 63.7(a)(2). [40 CFR 63.6610(a)]
iii. The Permittee shall conduct subsequent performance tests every 8,760 hours or 3 years, whichever comes first. [40 CFR 63.6615, Table 3]
iv. Each performance test shall be conducted according to the requirements of 40 CFR 63 Subpart ZZZZ Table 4. If a non-operational stationary RICE is subject to performance testing, the Permittee does not need to start up the engine solely to conduct the performance test. The Permittee can conduct the performance test when the engine is started up again. [40 CFR 63.6620(a),(b)]
v. The Permittee shall demonstrate initial compliance with the limitations in the Emissions and Operating Limitations according to Subpart ZZZZ Table 5. [40 CFR 63.6630(a)]
vi. If the catalyst is changed, the Permittee shall reestablish the values of the operating parameters measured during the initial performance test. When reestablishing the values of the operating parameters, the Permittee shall also conduct a performance test to demonstrate that the required

emission limitation applicable to the stationary RICE is met. [40 CFR 63.6640(b)]

In the most recent compliance inspection report dated July 13, 2023, Mr. Chen indicated that "MBCI has installed the catalyst and crankcase ventilation system. The last test was done in November of 2020 and the next one is scheduled in 2023." According to the MEMORANDUM dated September 27, 2023 sent by Gregg O'Neal, DAQ Stationary Source Compliance Branch (SSCB), the most recent Carbon Monoxide Emissions Testing of MACT Subpart ZZZZ for the Diesel-Fired Emergency and Peak Shaving Generator (I.D. No. ES-PS) was performed May 17, 2023 by Grace Consulting, Inc. and compliance was indicated for emergency and peak shaving generator ES-PS with 40 CFR 63 Subpart ZZZZ, for CO emissions by reduction efficiency 83.4%. Subsequent performance tests must be conducted every 8,760 hours or 3 years, whichever comes first since the previous test date. [See: 40 CFR 63.6615, Table 3]. Continued compliance is expected.

Monitoring [15A NCAC 2Q .0508(f)]
The Permittee shall install, operate, and maintain continuous parameter monitoring systems (CPMS) to monitor the catalyst inlet temperature for each catalyst and reduce the temperature data to 4- hour rolling averages. The Permittee shall maintain the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature in Section 2.1 D.4.j. [40 CFR 63 Subpart ZZZZ Table 5, 63.6625(b), 63.6640(a), Table 6]

The pressure drop across the catalyst must also be measured once per month. The temperature and pressure ranges for compliance are established during the performance stack test. The new data recorder can be connected to a laptop for easy data transferal. The data logger is recording the temperature and pressure drop logs, and run times accordingly.

Recordkeeping [15A NCAC 2Q .0508(f)]
The Permittee shall keep records of the following monitoring data:

i. catalyst(s) inlet temperature data including the 4-hour rolling averages; and
ii. the monthly measurements of the pressure drop across the catalyst(s).

[40 CFR 63.6655(d)]

The Permittee shall keep the following:

i. A copy of each notification and report that was submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status that was submitted, according to the requirement in 40 CFR 63.10(b)(2)(xiv).
ii. Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment.
iii. Records of performance tests and performance evaluations as required in 40 CFR 63.10(b)(2)(viii).
iv. Records of all required maintenance performed on the air pollution control and monitoring equipment.
v. Records of actions taken during periods of malfunction to minimize emissions in accordance with Section 2.1 D.4 f.ii, including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

[40 CFR 63.6655(a)]

For each inlet catalyst temperature CPMS, the Permittee shall keep the following records:

i. Records described in 40 CFR 63.10(b)(2)(vi) through (xi).
ii. Previous (i.e., superseded) versions of the performance evaluation plan as required in 40 CFR 63.8(d)(3).
iii. Requests for alternatives to the relative accuracy test for CPMS as required in 40 CFR 63.8(f)(6)(i), if applicable.

[40 CFR 63.6655(b)]

The Permittee shall keep each record in a form suitable and readily accessible for expeditious review in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 CFR 63.10(b)(1). [40 CFR 63.6660]

Reporting [15A NCAC 2Q .0508(f)]
The permittee shall submit a compliance report semiannually postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of noncompliance with the requirements of this permit must be clearly identified. [40 CFR 63.6650(a), (b)(5) and 63.6650(f)]
In the 89 FR 70515, Aug. 30, 2024, EPA finalized amendments to add electronic reporting provisions for NESHAP Subpart ZZZZ. Therefore, the following requirements have been added to the proposed permit with this Title V permit renewal/modification revision.

The permittee shall also submit electronic copies of certain initial notifications of compliance, performance test reports, Notification of Compliance Status (NOCS), and semiannual compliance reports through the EPA's Central Data Exchange (CDX) (https://cdx.epa.gov/) using the Compliance and Emissions Data Reporting Interface (CEDRI). Instead of using the electronic report in CEDRI for this subpart, the Permittee shall submit an alternate electronic file consistent with the XML schema listed on the CEDRI Web site (http://www.epa.gov/ttn/chief/cedri/index.html), once the XML schema is available. If the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the Permittee shall submit the report to the Administrator at the appropriate address listed in 40 CFR 63.13. The Permittee shall begin submitting reports via CEDRI no later than 90 days after the form becomes available in CEDRI.
[40 CFR 63.7550(h)(3)]

The compliance report must contain:
i. Company name and address;
ii. Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report; and
iii. Date of report and beginning and ending dates of the reporting period.
iv. If a malfunction occurred during the reporting period, the compliance report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with Section 2.1 D.4.f.ii, including actions taken to correct a malfunction.
v. If there are no instances of noncompliance from any emission or operating limitations that apply, a statement that there were no instances of noncompliance from the emission or operating limitations during the reporting period.
vi. If there were no periods during which the CPMS was out-of-control, as specified in 40 CFR63.8(c)(7), a statement that there were no periods during which the CPMS was out-of-control during the reporting period.
[40 CFR 63.6650(c)]

For each instance of noncompliance from an emission or operating limitation that occurs for the stationary RICE where the Permittee is not using a CMS to comply with the emission or operating limitations, the compliance report must contain the information in Section 2.1 D.4.l.iii.(A) through (D) and the following information:
i. The total operating time of the stationary RICE at which the instance of noncompliance occurred during the reporting period.
ii. Information on the number, duration, and cause of instances of noncompliance (including unknown cause, if applicable), as applicable, and the corrective action taken.
[40 CFR 63.6650(d)]

For each instance of noncompliance from an emission or operating limitation occurring for a stationary RICE where the Permittee is using a CMS to comply with the emission and operating limitations in this subpart, the Permittee shall include information in Section 2.1 D.4.l.iii.(A) through (D) and the information in Section 2.1 D.4.l.v. [40 CFR 63.6650(e)

This permit renewal does not affect these requirements. Continued compliance is expected.

4. 15A NCAC 02Q .0317 – Avoidance Condition for 15A NCAC 02D .0530: Prevention of Significant Deterioration

In order to avoid applicability of 15A NCAC 02D .0530, the generator is restricted to 40 tons of nitrogen oxides emissions per consecutive 12-month period. This facility has been avoiding PSD for NOx since the 08804/T07 permit revision issued August 27, 2009.

Monitoring/Recordkeeping/Reporting Requirements

MasterBrand must calculate monthly NO_x emissions and record them in a logbook according to the following formula:

Total Actual Tons NOx emitted = X hrs * 0.024 lb/HP-hr * 1447 HP/2,000 lb/ton

MasterBrand is required to record and submit a semi-annual report on the monthly hours of operation, the monthly NO_x and the rolling 12-month total NO_x. The semi-annual report received on February 1, 2024 showed that the highest 12-month rolling total was 0.751 tons NO_x from January to December, 2023, indicated compliance. The most recent semi-annual report of PSD Avoidance received on August 2, 2024 was reviewed by Randall Jones with compliance conclusion in DAQ IBEAM. Continued compliance is expected.

E. One diesel-fired emergency fire pump engine (ID No. ES-EFP)

1. 15A NCAC 02D .0516 – Sulfur Dioxide Emissions from Combustion Sources

Emissions of sulfur dioxide from the diesel-fired emergency fire pump engine **(ID No. ES-EFP)** shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard. The small (<600 hp) emergency fire pump **(ID No. ES-EFP)** is expected to emit SO_2 at a rate of 0.29 lb/ MMBtu using the emission factor for combusting diesel fuel in an industrial engine published in Section 3.3 of AP-42, revised October 1996. Compliance is demonstrated. As previously discussed, the facility only uses Ultra Low Sulfur Diesel (ULSD). No monitoring, recordkeeping, or reporting is required for sulfur dioxide emissions from firing ULSD fuel in this source. Continued compliance is expected.

2. 15A NCAC 02D .0521 – Control of Visible Emissions

Visible emissions from this source **(ID No. ES-EFP)** are limited to an opacity of 20%. Visible emissions (VE) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

The emissions of PM (visible emissions) are low from the emergency fire pump engine fired Ultra Low Sulfur Diesel (ULSD) fuel. There are no monitoring/recordkeeping/reporting requirements under this rule. Continued compliance is expected.

3. 15A NCAC 02D .1111 – Maximum Achievable Control Technology (40 CFR Part 63, Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines)

The diesel-fired emergency fire pump engine (ID No. ES-EFP) considered as an "existing source is subject to 40 CFR Part 63, Subpart ZZZZ.

The Permittee shall install a non-resettable hour meter on the IC engine if one is not already installed. [40 CFR 63.6625(f)]

There is no time limit on the use of emergency stationary RICE in emergency situations. The Permittee may operate the emergency fire pump engine **(ID No. ES-EFP)** for any combination of the purposes for a maximum of 100 hours per calendar year. The emergency generator fire pump engine **(ID No. ES-EFP)** may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are

counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response. The emergency fire pump engine **(ID No. ES-EFP)** requires annual maintenance and inspection.

Operating and Maintenance Requirements [15A NCAC 02Q .0508(b)]
During periods of startup of the IC engine, the Permittee shall minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply. [40 CFR 63.6602 and 63.6625(h)]

EPA finalized amendment 89 FR 70515, Aug. 30, 2024 to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Reciprocating Internal Combustion Engines (RICE), the New Source Performance Standards (NSPS) for Stationary Compression Ignition (CI) Internal Combustion Engines, and the NSPS for Stationary Spark Ignition (SI) Internal Combustion Engines. In response to the amended 89 FR 70515, Aug. 30, 2024 regarding Clarifications to the Oil Change Requirement in NESHAP Subpart ZZZZ, the following updates have been made with this Title V permit renewal/modification revision.

Except during periods of startup of the IC engine, the Permittee shall:

i. Change oil and filter every 500 hours of operation, or within 1 year + 30 days of the previous change, whichever comes first;
ii. Inspect air cleaner every 1,000 hours of operation, or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary; and
iii. Inspect all hoses and belts every 500 hours of operation, or within 1 year + 30 days of the previous inspection, whichever comes first, whichever comes first, and replace as necessary.

[40 CFR 63.6602, Table 2C]

Please noted that per the last revised §60.4243 as amended 87 FR 48606, Aug. 10, 2022, the "emergency demand response" on the paragraphs (d)(2)(ii) and (iii) has been vacated, therefore, the operation for emergency demand response is no longer allowed for emergency engines. The permit conditions of Operating and Maintenance Requirements in the Section 2.1 E.3.m.(2).(ii) and (iii) in the current permit 08804T13 have been removed with this Title V renewal/modification revision.

Recordkeeping [15A NCAC 02Q .0508(f)]
The Permittee shall keep the following:

i. A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted, according to the requirement in 40 CFR 63.10(b)(2)(xiv).[40 CFR 63.6655(a)(1)]
ii. Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment. [40 CFR 63.6655(a)(2)]
iii. Records of all required maintenance performed on the air pollution control and monitoring equipment. [40 CFR 63.6655(a)(4)]
iv. Records of actions taken during periods of malfunction to minimize emissions in accordance with condition in Section 2.1 E.3.k., including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. [40 CFR 63.6655(a)(5)]
v. Records of the maintenance conducted on the RICE pursuant to Section 2.1 E.3.l. [40 CFR 63.6655(d) and (e)]
vi. Records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The Permittee shall document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engine is used for the purposes specified in (m)(2)(ii) or (iii) above, the owner or operator must keep records of the notification of the emergency situation, and the date, start time, and end time of engine operation for these purposes.

[40 CFR 63.6655(f)]

The Permittee shall keep each record in a form suitable and readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 CFR 63.10(b)(1). [40 CFR 63.6660(a), (b), (c)]

Reporting [15A NCAC 02Q .0508(f)]
The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of noncompliance must be clearly identified. [40 CFR 63.6640(b), (e), and 63.6650(f)]

In the 89 FR 70515, Aug. 30, 2024, EPA finalized amendments to add electronic reporting provisions for NESHAP Subpart ZZZZ. Therefore, the following requirements have been added to the proposed permit with this Title V permit renewal/modification revision:
The compliance report shall also be submitted electronically via the Compliance and Emissions Data Reporting Interface (CEDRI). CEDRI can be accessed through the EPA's Central Data Exchange (CDX) (https://cdx.epa.gov/). The Permittee shall use the appropriate electronic report in CEDRI for this subpart. Instead of using the electronic report in CEDRI for this subpart, The Permittee shall submit an alternate electronic file consistent with the XML schema listed on the CEDRI Web site (http://www.epa.gov/ttn/chief/cedri/index.html), once the XML schema is available. If the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the Permittee shall submit the report to the Administrator at the appropriate address listed in 40 CFR 63.13. The Permittee shall begin submitting reports via CEDRI no later than 90 days after the form becomes available in CEDRI. [40 CFR 63.7550(h)(3)]

Continued compliance is expected.

F. Facility-Wide

1. 15A NCAC 02D .1806 – Control and Prohibition of Odorous Emissions ***(State-enforceable only)***

The facility is subject to this regulation because it has the potential to be a source of odorous emissions. This is a State-enforceable only requirement. It requires the facility to utilize management practices or odor control equipment sufficient to prevent odorous emissions from causing or contributing to objectionable emissions beyond the facility boundaries. Continued compliance is expected.

VI. NSPS, NESHAPS/MACT, PSD, 112(r), CAM

NSPS

The Permittee is not currently subject to any New Source Performance Standards. This permit renewal does not affect this status.

NESHAPS/MACT

National Emissions Standards for Hazardous Air Pollutants for Source Categories (NESHAP/MACT) found in 40 CFR Part 63 are applicable to major and/or area sources of HAP depending on the specific Subpart of 40 CFR Part 63. A HAP major source is defined as having potential emissions of 10 tpy or more for any individual HAP and/or potential emissions of 25 tpy or more for total HAP. This facility is a major source of HAP because it has actual emissions of HAP greater than these thresholds. Because this facility is a major source of HAP, rules that apply exclusively to area sources of HAP (e.g., Subpart JJJJJJ) categorically do not apply to this facility.

The Permittee is subject to 15A NCAC 02D .1111: Maximum Achievable Technology and 40 CFR Part 63 Subpart JJ, "National Emission Standards for Hazardous Air Pollutants for Wood Furniture Manufacturing

Operations", for the Conventional Cabinet Finishing Operations **(ID No. CF1)** with associated seventeen dry filter-type spray booths **(ID Nos. SBA1 through SBA16 and SBA25)** and four Drying Ovens **(ID Nos. OVGA1 through OVGA4)**; and for the High Volume Line Cabinet Finishing Operations **(ID No. CF2)** with associated dry filter-type spray booths **(ID Nos. SBB1 through SBB20)** and **OVGB1 and OVGB2)**.

Work Practice Standards
The Permittee shall adhere to the work practice standards as specified by 40 CFR 63.803.

(a) **Recordkeeping Requirements** – The Permittee shall prepare, maintain, and follow a written work practice implementation plan in accordance with 40 CFR 63.806(e) that defines environmentally desirable work practices for each wood furniture manufacturing operation and addresses each of the work practice standards specified in the items below:

Operator training – in accordance with 40 CFR 63.803(b):
- A list of all current personnel by name and job description that are required to be trained;
- An outline of the subjects to be covered in the initial and refresher training for each position or group of personnel;
- Lesson plans for courses to be given at the initial and the annual refresher training that include, at a minimum, appropriate application techniques, appropriate cleaning and wash-off procedures, appropriate equipment setup and adjustment to minimize finishing material usage and overspray, and appropriate management of cleanup wastes; and
- A description of the methods to be used at the completion of initial or refresher training to demonstrate and document successful completion.

According to the most recent compliance inspection report dated July 13, 2023, "MBCI's training plan is stored in a MACT notebook with the Inspection and Maintenance Plan. They have a 16-page PowerPoint presentation that he uses as part of the personnel training. The PowerPoint indicates that the class is meeting the lesson plan requirement. Employees are tested at the end of the training, and must make at least a 70 to pass." Compliance is indicated.

Inspection and maintenance plan – in accordance with 40 CFR 63.803(c):
Written leak inspection and maintenance plan that specifies:

- A minimum visual inspection frequency of once per month for all equipment used to transfer or apply coatings, adhesives, or organic HAP solvents;
- An inspection schedule;
- Methods for documenting the date and results of each inspection and any repairs that were made; and
- The timeframe between identifying the leak and making the repair. A first attempt at repair (e.g., tightening of packing glands) shall be made no later than five calendar days after the leak is detected. Final repairs shall be made within 15 calendar days after the leak is detected, unless the leaking equipment is to be replaced by a new purchase, in which case repairs shall be completed within three months.

According to the most recent compliance inspection report dated July 13, 2023, "MBCI does have a written plan that is stored in a MACT JJ notebook with the training plan. The inspection schedules are documented. It is my understanding all leaks are repaired immediately. The paint mixing/paint rooms are inspected monthly. The booth operators inspect the guns daily. The guns and hoses are pressure tested and inspected monthly for leaks. In the past it was noted that there is an existing memorandum of agreement that the guns should operate at 10 inches or less psi, which is a manufacturer's recommendation." Compliance is indicated.

Cleaning and wash-off solvent accounting system – in accordance with 40 CFR 63.803(d);
Organic HAP solvent accounting form to record:

- The quality and type of organic HAP solvent used each month for wash-off and cleaning, as defined in CFR 63.801 of this subpart;
- The number of pieces washed off, and the reason for the wash-off; and
- The quantity of spent organic HAP solvent generated from each wash-off and cleaning operation each month, and whether it is recycled onsite or disposed offsite.

In the most recent compliance inspection report, Mr. Chen specified that "MBCI only cleans their guns with solvent, they use acetone. Cleaner usage is tracked in the same manner as their coating usage. Mr. Kelly inventories the amount of waste cleaner each month." Compliance is indicated.

Chemical composition of cleaning and wash-off solvents – in accordance with 40 CFR 63.803(e);

In the most recent compliance inspection report, Mr. Chen specified that "MasterBrand uses wash off solvents for cleaning ports. They only clean their spray guns by using acetone." Compliance is indicated.

Spray booth cleaning – in accordance with 40 CFR 63.803(f);

- Each owner or operator of an affected source shall not use compounds containing more than 0.8 lb VOC per lb solids for cleaning spray booth components other than conveyors, continuous coaters and their enclosures, or metal filters, or plastic filters unless the spray booth is being refurbished. If the spray booth is being refurbished, that is the spray booth coating or other protective material used to cover the booth is being replaced, the affected source shall use no more than 1.0 gallon of organic HAP solvent per booth to prepare the surface of the booth prior to applying the booth coating.

According to the most recent compliance inspection report, "MasterBrand cleans their spray booths once every six months. The sides are scraped. They use less than 1 gallon per booth, and the cleaning material meets the limitation [0.8 lb VOC/lb (or kg VOC/kg) solids, as applied]." Compliance is indicated.

Storage requirements – in accordance with 40 CFR 63.803(g);

- Each owner or operator of an affected source shall use normally closed containers for storing finishing, gluing, cleaning, and wash-off materials.

In his most recent compliance inspection report, Mr. Chen stated that "Part of MBCI's training of booth operators is stressing the need to keep containers closed when not in use. I saw no open containers next to the booths or in the storage and mixing areas during the inspection." Compliance is indicated.

Application equipment requirements – in accordance with 40 CFR 63.803(h);

- Effective **November 21, 2014,** conventional air spray guns are allowed only when emissions are vented to a control device)

In the compliance inspection report, Mr. Chen indicated that "MBCI uses air assisted and HVLP guns."

Line cleaning – in accordance with 40 CFR 63.803(i);

- Each owner or operator of an affected source shall pump or drain all organic HAP solvent used for line cleaning into a normally closed container.

Gun cleaning – in accordance with 40 CFR 63.803(j);

- Each owner or operator of an affected source shall collect all organic HAP solvent used to clean spray guns into a normally closed container.

In the most recent compliance inspection report, Mr. Chen indicated that "Part of MBCI's training of booth operators is stressing the need to keep containers closed when not in use. It is part of the operator's daily inspection. No open containers were observed next to the booths during the inspection.

Wash-off operation – in accordance with 40 CFR 63.803(k);

According to the most recent compliance inspection report, MasterBrand does not perform wash-off operations, so this section does not apply.

Formulation assessment plan – in accordance with 40 CFR 63.803(l);

- MasterBrand must identify any VHAP in Table 6 of the rule that they emit and track annual usage of them.
- If usage is above any of the de minimus in Table 6, then MasterBrand is required to provide an explanation to DAQ for the exceedance. If the explanation is not one of those listed in paragraphs 40 CFR 63.803(l)(4)(i) through (l)(4(iv) of this section, the affected source shall follow the procedures in 40 CFR 63.803(l)(5) of this section.
- If none of the above explanations are the reason for the increase, the owner or operator shall confer with the permitting authority to discuss the reason for the increase and whether there are practical and reasonable technology-based solutions for reducing the usage.

MasterBrand is certifying against the Table 5 rather than Table 6 compounds each year. However, the only HAPs the facility emits that are on both tables are formaldehyde and glycol ethers. Their usages are below thresholds.

(b) Reporting Requirements – The Permittee shall submit the compliance status report to the Regional Office in accordance with 40 CFR 63.804(f)(8) and 63.807(b). The Permittee shall submit semi-annual reports to the Regional Office in accordance with 40 CFR 63.804(g)(8) and 63.807(c). The Permittee shall follow the requirements in 40 CFR 63.807(e) as required and 40 CFR 807(a) following the applicability criteria in 40 CFR 63.800(d).

According to the IBEAM records, the most recent semi-annual reports were received by DAQ WaRO on 8/02/24 (postmarked 7/30/24) and reviewed by Randall Jones on 8/23/2024 with compliance conclusion. Continued compliance is expected.

Averaging Compliance Option

Finishing operations **(ID Nos. CF1 and CF2)** are utilizing the averaging compliance option.

(a) Emission limits – The Permittee shall comply with all provisions per 40 CFR 63.802 as applicable to the finishing operations **(ID Nos. CF1 and CF2)**. The weighted average VHAP content across all coatings, as applied, shall not exceed 0.8 kg VHAP per kg solids (0.8 lb VHAP per lb solids).

(b) Compliance procedures and monitoring requirements – The Permittee shall demonstrate that the monthly average VHAP content for all finishing materials used at the facility is no greater than 0.8 kg VHAP per kg solids (0.8 lb VHAP per lb solids), as applied. The average VHAP content (E) shall be calculated by the following equation:

$$E=\frac{(\sum M_{cn}C_{cn}+\sum S_n W_n)}{(\sum M_{cn})}$$

Where:

M_c = the mass of solids in a finishing material (c), in kilograms;

C_c = the VHAP content of a finishing material (c), in kilograms of volatile hazardous air pollutants per kilogram of coating solids (kg VHAP/kg solids (lb VHAP/lb solids)), as supplied;
S = the VHAP content of a solvent, expressed as a weight fraction, added to finishing materials; and
W = the amount of solvent, in kilograms, added to finishing materials during the monthly averaging period.

(c) **Performance Test Method** – EPA Method 311 (40 CFR Part 63, Appendix A) shall be used in conjunction with formulation data to determine the VHAP content of liquid coatings. Formulation data shall be used to identify the VHAP present in the coating. EPA Method 311 shall then be used to quantify those VHAP. If the coating does not release the VOC or VHAP byproducts during the cure, for example, all the VOC and VHAP present in the coating is solvent, then batch formulation information shall be accepted.

(d) **Recordkeeping Requirements** – The Permittee shall fulfill all recordkeeping requirements of 40 CFR 63.10, according to the applicability criteria in 40 CR 63.800(d). In accordance with 40 CFR 63.10(b)(10), all records shall be maintained for a period of five years and, at a minimum, the most recent two years of data shall be retained on-site. The Permittee shall maintain files of all required information (including all reports and notifications) in a form suitable and readily available for expeditious inspection and review. Required recordkeeping includes, but is not limited to, the following:

i. per 40 CFR 63.10(b)(xiv), the owner or operator shall maintain records of all documentation supporting initial notifications and notifications of compliance status;
ii. per 40 CFR 63.806(b), the owner or operator shall maintain:
    A. a certified product data sheet for each thinner and each finishing material; and
    B. records of the VHAP content, in kg VHAP/kg solids (lb VHAP/lb solids), as applied, of each finishing material; and
iii. the owner or operator shall maintain records of all compliance certifications submittal and all other information submitted with compliance certifications and/or compliance status reports.

(e) **Notification Requirements** – In addition to any other notification requirements to the EPA, the Permittee is required to notify the Regional Office DAQ in writing of the following:

i. Notification of Compliance Status – Per 40 CFR 63.807(b), a notification of compliance status shall be submitted no later than 60 days after the compliance date. The report shall include the results of the averaging calculation (Equation 1) for the entire first month (the calendar month which includes the initial compliance date); and
ii. Continuous Compliance Demonstration – The owner or operator shall submit semiannual reports covering the previous six-months of wood furniture manufacturing operations. The first report shall be submitted within 30 calendar days after the end of the first six-month period. The first six-month period shall include the six full calendar months following the initial compliance date's calendar month. Subsequent reports shall be submitted within 30 calendar days after the end of each six-month period following the first six-month period. The reports shall include:
    A. the results of the averaging calculation (Equation 1) for each month in the six-month period; and
    B. a compliance certification signed by the responsible official of the company that owns or operates the affected source which states:
        (1) whether the affected source was in compliance; or, if the affected source was not in compliance, the measures taken to bring the affected source into compliance; and
        (2) that the value of E, as calculated using Equation 1, was less than 0.8 for each month during the period, or should otherwise identify those months during which the value of E exceeded 0.8.

Cleaning Operations

(a) **Emission Limits** – The Permittee shall comply with the limits of 40 CFR 63.802(a)(3) applicable to the strippable spray booth operations **(ID Nos. CF1 and CF2)** as detailed in the following table:

Emission Source(s)	Regulated Material	Emission Limitation
(ID Nos. CF1 and CF2)	Strippable spray booth coatings	0.8 lb VOC per lb (or kg VOC/kg) solids, as applied

(b) **Compliance Procedures and Monitoring Requirements** – The Permittee shall demonstrate that only compliant strippable spray booth coatings are used in accordance with 40 CFR 63.804(g)(7).

(c) **Performance Test Method** – EPA Method 311 [40 CFR Part 63, Appendix A] shall be used to determine the VHAP content of liquid coatings in accordance with 40 CFR 63.805(a).

(d) **Recordkeeping Requirements** – The Permittee shall keep records in accordance with 40 CFR 63.806(a) following the applicability criteria in 40 CFR 63.800(d), 63.806(b)(1) and (b)(3), 63.806(h), 63.806(i), and 63.806(j).

(e) **Reporting Requirements** – The Permittee shall submit the compliance status report to the Regional Office in accordance with 40 CFR 63.804(f)(7) and 63.807(b). The Permittee shall submit semiannual reports to the Regional Office in accordance with 40 CFR 63.804(g)(7) and 63.807(c). The Permittee shall follow the requirements in 40 CFR 63.807(a) following the applicability criteria in 40 CFR 63.800(d).

According to the IBEAM records, the Title V Annual Compliance Certification (Annual-ACC) received on March 1, 2024 was reviewed by Betsy Huddleston of WaRO with compliance conclusion. The most recent semi-annual reports were received on August 2, 2024 and reviewed with compliance conclusion by Randall Jones of DAQ WaRO. Continued compliance is expected.

Formaldehyde Requirements

The Permittee shall comply with one of the following two options.

(a) **Option #1 (400 lb formaldehyde limit per rolling 12 month period)** –
The total emissions option, staying under 400 lbs of formaldehyde emissions in a 12-month period and submitting semi-annual report showing rolling 12-month totals.

(b) **Option#2 (CPDS ≤ 1.0% by weight formaldehyde) –**

i. **Emissions Limits** – In accordance with 40 CFR 63.802(a) and (b), use coatings and contact adhesives only if they are low-formaldehyde coatings and adhesives, in any wood furniture manufacturing operations. *Low-formaldehyde* means, in the context of a coating or contact adhesive, a product concentration of less than or equal to 1.0 percent formaldehyde by weight, as described in a certified product data sheet for the material.

ii. **Compliance Procedures and Monitoring Requirements** – In accordance with 40 CFR 63.804(h), demonstrate compliance by use of coatings and contact adhesives only if they are *low-formaldehyde* coatings and contact adhesives maintaining a certified product data sheet for each coating and contact adhesive used and submitting a compliance certification with the semi-annual report.

iii. **Recordkeeping Requirements** – In accordance with 40 CFR 63.806(b), the Permittee shall keep a certified product data sheet for each coating and contact adhesive used.

iv. **Reporting Requirements** - The Permittee shall submit semi-annual reports to the Regional Office in accordance with 40 CFR 40 CFR 63.807(c) and 40 CFR 63.804(h). The compliance certification shall state that low-formaldehyde coatings and contact adhesives, as applicable, have been used each day in the semiannual reporting period or should otherwise identify the periods of noncompliance and the reasons for noncompliance. An affected source is in violation of the standard whenever a coating or contact adhesive that is not low-formaldehyde, as demonstrated by records or by a sample of the coating or contact adhesive, is used. Use of a noncompliant coating or contact adhesive is a separate violation for each day the noncompliant coating or contact

adhesive is used. The compliance certification shall be signed by a responsible official of the company that owns or operates the affected source.

Yongcheng Chen's July 13, 2023 Inspection Report stated that MasterBrand is currently using Option #2, certified by the all-inclusive statement that they are following all appropriate Subpart JJ standards.

Contact Adhesive Operations

During the technical review for this permit renewal/modification application, this permit writer contacted the facility regarding whether there are any contact adhesive applications at the facility. Mr. Kelly replied via an email received on September 4, 2024 stating that "Our facility does not have a process that uses contact adhesion. We have a laminator that puts paper on the wood but do not have a contact adhesion process." However, during the permit draft review, Ms. Gains indicated that contact adhesives are being used at the facility. Per this permit writer's request, Ms. Gains provided the information in detail as following via email on November 5, 2024.

"With regards to our production processes, we have determined that we are currently using contact adhesives in the repair of cabinet parts that do not pass quality standards. Instead of disposing of the cabinet part as waste, we can adequately repair it for use in a cabinet using the contact adhesive products. SDSs for the adhesive products in use are attached. A technical data sheet for one of the products (M745-2012) is also attached. The manufacturer did not provide technical data sheets for the other two products. There are several repair stations within the plant. The contact adhesive products are used in small quantities at those repair stations. Summary of usage based on a typical calendar month:

Product	Container Size	Quantity/Month	Monthly Usage	Annual Usage
M745-1310	8 oz	2 bottles	16 oz	192 oz
M745-1260	2 oz	20 bottles	40 oz	480 oz
M745-2012	13 oz aerosol	20 cans	260 oz	3,120 oz

We are continuing to review the products used by our maintenance team to maintain the facility. A review of products in the maintenance area over the last few days did not find any contact adhesives. My concern is that we could have a need to use contact adhesives to repair/glue a sagging headliner on a truck or to glue together a new cart to transfer cabinet parts between production areas. These are not cabinet production uses, but a limited use of contact adhesives that may be purchased at a local hardware store."

Based on the above technical additional information provided by the facility, the repair of cabinet parts is considered product process operation. The repair stations will be listed as an emission source **(Assigned source ID: ES-RS)** with a description of "Adhesive application stations for product repair" to cover the use of adhesives. Per the facility's request, the following requirements for Contact Adhesive Operations will be added to the proposed permit under Section 2.2.B.9 on page 25:

i. **Emission Limits** - The Permittee shall comply with all provisions of 40 CFR 63.802(a)(2) and 63.804(b-c) as applicable to the contact adhesive operations **(ID No. ES-RS)** as detailed in the following table:

Emission Source	Regulated material	Emission Limitation
ID No. ES-RS	all other contact adhesives	1.0 kg VHAP per kg solids (1.0 lb VHAP per lb solids), as applied

ii. **Compliance Procedures and Monitoring Requirements** - When emission source **(ID No. ES-RS)** is using foam and other contact adhesives, the Permittee shall demonstrate that only compliant adhesives are used in accordance with 40 CFR 63.804(g)(5).

iii. **Performance Test Method** - EPA Method 311 [40 CFR Part 63 Appendix A] shall be used to determine the VHAP content of liquid coatings in foam and other contact adhesives in accordance with 40 CFR 63.805(a).

iv. **Recordkeeping Requirements** - When foam and other contact adhesives are used, the Permittee shall keep records in accordance with 40 CFR 63.806(a) following the applicability criteria in 40 CFR 63.800(d), 63.806(b)(1) and (b)(2), 63.806(h), 63.806(i), and 63.806(j).
v. **Reporting Requirements** - When foam and other adhesives are used, the Permittee shall submit the compliance status report to the Regional Supervisor in accordance with 40 CFR 63.804(f)(5) and 63.807(b). When foam and other contact adhesives are used, the Permittee shall submit semiannual reports to the Regional Supervisor in accordance with 40 CFR 63.804(g)(5) and 63.807(c). When foam and other contact adhesives are used, the Permittee shall follow the requirements in 40 CFR 63.807(a) following the applicability criteria in 40 CFR 63.800(d).

The facility has option to use contact adhesives in product process and is required to be in compliance with the above requirements. The SDSs for the adhesive products in use and the technical data sheet for one of the products (M745-2012) provide by Ms. Gains are listed as Attachment 3 to this technical review. Compliance is expected.

It should be noted that adding **ES-RS** to the permit does not represent a modification by MasterBrand. This is only to ensure the Title V permit accurately represents the activities at MasterBrand.

Using contact adhesives to repair truck headliners etc. would fall under 02Q .0503(7), janitorial products. It is not considered product process and won't be included in the permit.

Since the last Title V permit renewal Permit No. 08804T12 issued December 12, 2017 for MasterBrand Cabinets, Inc. - Kinston Plant #9, there was an amendment 85 FR 73895, Nov. 19, 2020 to the General Provisions that apply to National Emission Standards for Hazardous Air Pollutants (NESHAP). The amendment implements the plain language reading of the ''major source'' and ''area source'' definitions of section 112 of the Clean Air Act (CAA) and provide that a major source can be reclassified to area source status at any time upon reducing its potential to emit (PTE) hazardous air pollutants (HAP) to below the major source thresholds (MST) of 10 tons per year (tpy) of any single HAP and 25 tpy of any combination of HAP. The facility did not request any source reclassification in the application of Title V permit renewal and the modification only related to the bagfilter replacement. Therefore, the amendments of 85 FR 73895, Nov. 19, 2020 do not change any permit conditions and no revision is required. Continued compliance is expected.

The Permittee is subject to 15A NCAC 02D .1111 – Maximum Achievable Control Technology (40 CFR Part 63, Subpart ZZZZ) – National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE MACT).

The MasterBrand has the following permitted sources at the site subject to 40 CFR Part 63, Subpart ZZZZ:

- One diesel-fired peak shaving generator (**ID No. ES-PS**). See discussions for more details under Section 2.1 D.3 15A NCAC 02D .1111 – Maximum Achievable Control Technology (40 CFR Part 63, Subpart ZZZZ) – National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.
- One diesel-fired emergency fire pump engine (**ID No. ES-EFP)**. See discussions for more details under Section 2.1 E.3 15A NCAC 02D .1111 – Maximum Achievable Control Technology (40 CFR Part 63, Subpart ZZZZ) – National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.

PSD

This facility is a major stationary source because it has potential emissions of a regulated NSR pollutant (VOC) greater than the threshold in 40 CFR 51.166(b)(1).

The High Volume Line Cabinet Finishing Operations **(ID No. CF2)** with associated dry filter-type spray booths **(ID Nos. SBB1 through SBB20)** are subject to 15A NCAC 02D .0530 – Prevention of Significant

Deterioration. Volatile organic compound (VOC) emissions from high volume line paint booths SBB1 through SBB20 shall be less than 620 tons per consecutive 12-month period. See discussions for more details under Section 2.1 A.3 15A NCAC 02D .0530 – Prevention of Significant Deterioration.

This facility is avoiding triggering additional requirements under PSD by complying with PSD avoidance limits for PM, PM_{10}, and NOx. See discussion under Sections V A.5 (PM/PM_{10}) and D.4 (NOx), respectively.

112(r)

The facility is not subject to Section 112(r) of the Clean Air Act requirements. In the application for renewal on Form A3, the permittee stated that no RMP was required because "No materials are stored in quantities exceeding threshold levels." This permit modification does not affect this status.

CAM

40 CFR Part 64 is applicable to any pollutant-specific emission unit, if the following three conditions are met:

- the unit is subject to any non-exempt (e.g. pre November 15, 1990, Section 111 or Section 112 standard) emission limitation or standard for the applicable regulated pollutant.
- the unit uses any control device to achieve compliance with any such emission limitation or standard.
- the unit's pre-control potential emission rate exceeds either 100 tpy (for criteria pollutants) or 10/25 tpy (for HAP's).

Because the woodworking operations **(ID Nos. ES-WO1, ES-WO2, and ES-WO3)** are subject to a non-exempt PM_{10} emission limit (02D .0512), and the facility uses control devices on the woodworking operations to comply with non-exempt emission limits for PM_{10}, and the woodworking operations have pre-control potential emissions of PM_{10} greater than 100 tpy, CAM applies. MasterBrand must perform the monitoring/recordkeeping/reporting on the bagfilters **(ID Nos. BH-1 through BH-8)**. See discussions for more details in this review under Section V B.3 15A NCAC 02D .0614 – Compliance Assurance Monitoring.

VII. Facility Wide Air Toxics

The Permittee is not currently subject to any Toxic regulations. This permit renewal does not affect this status.

VIII. Facility Emissions Review

This facility is a major source for Title V because it has potential emissions (after controls) of criteria pollutants (VOC) greater than the major source threshold in 40 CFR 70.2. Furthermore, the facility is a major source of HAP (see below).

This facility is a major source of hazardous air pollutants because it has potential emissions (after controls) of HAP greater than the major source threshold in 40 CFR 63.2.

This facility is a major stationary source under PSD because it has potential emissions of regulated NSR pollutants greater than the threshold in 40 CFR 51.166(b)(1).

Per this reviewer's request, the facility updated the facility-wide potential emissions on the revised Form D1 received on July 25, 2024. Actual emissions for criteria pollutants and HAPs for the previous five years reporting periods (CY2018 to CY2022) are provided in the header of this permit review.

IX. Compliance Status

The facility was inspected by Yongcheng Chen on **July 13, 2023**. Based on his observations, the facility appeared to be in compliance with their Title V permit requirements.

Five year compliance history

- A semi-annual report was received July 28, 2020. Review of the Jan - June 2020 semi-annual report noted violations of 2D.0521 and CAM recordkeeping requirements. The facility was issued a Notice of Violation (NOV) – Record Keeping on August 13, 2020. The NOV was resolved on August 19, 2020.

X. Affected State(s) Review

A notice of the DRAFT Title V Permit shall be made pursuant to 15A NCAC 02Q .0521. The notice will provide for a 30-day comment period, with an opportunity for a public hearing. Consistent with 15A NCAC 02Q .0525, the EPA will have a concurrent 45-day review period. Copies of the public notice shall be sent to persons on the Title V mailing list and EPA. Pursuant to 15A NCAC 02Q .0522, a copy of each permit application, each proposed permit and each final permit pursuant shall be provided to EPA. Also, pursuant to 02Q .0522, a notice of the DRAFT Title V Permit shall be provided to each affected State at or before the time notice is provided to the public under 02Q .0521.

XI. Other Changes

Removal of Affirmative Defense Provision from General Condition J

EPA has promulgated a rule (88 FR 47029, July 21, 2023), with an effective date of August 21, 2023, removing the emergency affirmative defense provisions in operating permits programs, codified in both 40 CFR 70.6(g) and 71.6(g). EPA has concluded that these provisions are inconsistent with the EPA's current interpretation of the enforcement structure of the CAA, in light of prior court decisions[1]. Moreover, per EPA, the removal of these provisions is also consistent with other recent EPA actions involving affirmative defenses[2] and will harmonize the EPA's treatment of affirmative defenses across different CAA programs.

As a consequence of this EPA action to remove these provisions from 40 CFR 70.6(g), it will be necessary for states and local agencies that have adopted similar affirmative defense provisions in their Part 70 operating permit programs to revise their Part 70 programs (regulations) to remove these provisions. In addition, individual operating permits that contain Title V affirmative defenses based on 40 CFR 70.6(g) or similar state regulations will need to be revised.

Regarding NCDAQ, it has not adopted these discretionary affirmative defense provisions in its Title V regulations (15A NCAC 02Q .0500). Instead, DAQ has chosen to include them directly in individual Title V permits as General Condition (GC) J.

Per EPA, DAQ is required to promptly remove such impermissible provisions, as stated above, from individual Title V permits, after August 21, 2023, through normal course of permit issuance.

Finally, it needs to be noted here that EPA has added a new HAP, 1-brompropane, to the CAA §112(b) list. According to the email received on July 8, 2024, Mr. Kelly stated that "We do not emit any 1-bromopropane (CAS 106-94-5)."

[1] NRDC v. EPA, 749 F.3d 1055 (D.C. Cir. 2014).

[2] In newly issued and revised New Source Performance Standards (NSPS), emission guidelines for existing sources, and NESHAP regulations, the EPA has either omitted new affirmative defense provisions or removed existing affirmative defense provisions. See, e.g., National Emission Standards for Hazardous Air Pollutants for the Portland Cement Manufacturing Industry and Standards of Performance for Portland Cement Plants; Final Rule, 80 FR 44771 (July 27, 2015); National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters; Final Rule, 80 FR 72789 (November 20, 2015); Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Commercial and Industrial Solid Waste Incineration Units; Final Rule, 81 FR 40956 (June 23, 2016).

XII. Conclusions, Comments, and Recommendations

PE Seal

Pursuant to 15A NCAC 02Q .0112 "Application Requiring a Professional Engineering Seal," a professional engineer's seal (PE Seal) is required to seal technical portions of air permit applications for new sources and modifications of existing sources as defined in Rule .0103 of this Section that involve:

(1) design;
(2) determination of applicability and appropriateness; or
(3) determination and interpretation of performance; of air pollution capture and control systems.

The new dust collectors will have a design capacity of 48,000 standard cubic feet per minute (SCFM) each, which the air flow is greater than 10,000 standard cubic feet per minute (SCFM). A professional engineer's seal (PE Seal) was required for this modification. The facility submitted a Form D5 received July 9, 2024, bearing the signature and seal of Sean B. Mulligan, North Carolina Registrtion No. 022147.

Zoning

A zoning consistency determination was not required for this Title V renewal/modification since the two new Torit 376-RFW-10 Dust Collectors (ID Nos. BH-4 and BH-5) replaced existing bagfilters BH-4 in series with cyclone CY-1 and bagfilters BH-5 at the same location.

Recommendations

The permit renewal/modification application for MasterBrand Cabinets LLC – Kinston Plant #9 has been reviewed by DAQ to determine compliance with all procedures and requirements. DAQ has determined this facility is complying or will achieve compliance, as specified in the permit, with all requirements that are applicable to the affected sources. DAQ recommends the issuance of Air Permit No. 08804T14 to MasterBrand Cabinets LLC – Kinston Plant #9.

XIII. Summary of Attachment

1. Email Correspondence with the facility (Mr. Kelly) and consultant (Ms. Amigo).
2. DAQ Bagfilter Evaluation Spreadsheets for Control Devices (ID Nos. BH-4 and BH-5).
3. SDSs for the adhesive products being used for product process operation.

XIV. Applicant Comments

DAQ provided a pre-public notice draft of the renewed Title V permit to MasterBrand on October 9 and November 21, 2024. Below is a summary of the comments received and DAQ's response.

DAQ notes in red.

1. Initial performance test of ID No. ES-PS: In the permit renewal draft, Section 2.1 D.4. i. ii. "The permittee shall conduct the initial performance test within 180 days after May 3, 2013 and according to the provisions in 40 CFR 63.7(a)(2)." In the previous permit, at 2.1 D.4. n.ii. the correlating statement read "The Permittee conducted its initial performance test on February 10, 2014 according to the provisions in 40 CFR 63.7(a)(2)." Shouldn't the new permit also reference the testing date on February 10, 2014?
   According to a Memorandum sent by DAQ Stationary Source Compliance Branch (SSCB) on October 17, 2014, the stack test was performed on February 10, 2014, and compliance was indicated. Per the discussion with Mr. Russell Braswell, Environmental Engineer III, Division of Air Quality, the Section 2.1 D.4.i.ii in the new permit will be updated to "The Permittee shall conduct the initial performance test within 180 days of the compliance date according to the provisions in 40 CFR 63.7(a)(2). [40 CFR 63.6610(a)]. *This requirement has been met*."

2. With regards to our production processes, we have determined that we are currently using contact adhesives in the repair of cabinet parts that do not pass quality standards. Instead of disposing of the cabinet part as waste, we can adequately repair it for use in a cabinet using the contact adhesive products. SDSs for the adhesive products in use are attached. A technical data sheet for one of the products (M745-2012) is also attached. The manufacturer did not provide technical data sheets for the other two products. There are several repair stations within the plant. The contact adhesive products are used in small quantities at those repair stations.

   Summary of usage based on a typical calendar month:

Product	Container Size	Quantity/Month	Monthly Usage	Annual Usage
M745-1310	8 oz	2 bottles	16 oz	192 oz
M745-1260	2 oz	20 bottles	40 oz	480 oz
M745-2012	13 oz aerosol	20 cans	260 oz	3,120 oz

   We are continuing to review the products used by our maintenance team to maintain the facility. A review of products in the maintenance area over the last few days did not find any contact adhesives. My concern is that we could have a need to use contact adhesives to repair/glue a sagging headliner on a truck or to glue together a new cart to transfer cabinet parts between production areas. These are not cabinet production uses, but a limited use of contact adhesives that may be purchased at a local hardware store.

   Based on the above information provided by the facility, the repair of cabinet parts is considered product process operation. Per the facility's request, the Contact Adhesive Operations under Section 2.2.B.8 on page 25 of the permit draft will be revised as follows:

   - The statement of "The Permittee shall not use contact adhesives as defined in 40 CFR 63.801." will be removed
   - The following requirements will be added to the permit draft:
     i. **Emission Limits** - The Permittee shall comply with all provisions of 40 CFR 63.802(a)(2) and 63.804(b-c) as applicable to the contact adhesive operations **(ID No. ES-RS)** as detailed in the following table:

Emission Source	Regulated material	Emission Limitation
ID No. ES-RS	all other contact adhesives	1.0 kg VHAP per kg solids (1.0 lb VHAP per lb solids), as applied

     ii. **Compliance Procedures and Monitoring Requirements** - When emission source **(ID No. ES-RS)** is using foam and other contact adhesives, the Permittee shall demonstrate that only compliant adhesives are used in accordance with 40 CFR 63.804(g)(5).
     iii. **Performance Test Method** - EPA Method 311 [40 CFR Part 63 Appendix A] shall be used to determine the VHAP content of liquid coatings in foam and other contact adhesives in accordance with 40 CFR 63.805(a).
     iv. **Recordkeeping Requirements** - When foam and other contact adhesives are used, the Permittee shall keep records in accordance with 40 CFR 63.806(a) following the applicability criteria in 40 CFR 63.800(d), 63.806(b)(1) and (b)(2), 63.806(h), 63.806(i), and 63.806(j).
     v. **Reporting Requirements** - When foam and other adhesives are used, the Permittee shall submit the compliance status report to the Regional Supervisor in accordance with 40 CFR 63.804(f)(5) and 63.807(b). When foam and other contact adhesives are used, the Permittee shall submit semiannual reports to the Regional Supervisor in accordance with 40 CFR 63.804(g)(5) and 63.807(c). When foam and other contact adhesives are used, the Permittee shall follow the requirements in 40 CFR 63.807(a) following the applicability criteria in 40 CFR 63.800(d).
   - The repair stations will be listed as an emission source (Assigned source ID: ES-RS) with a description of "Adhesive application for product repair" to cover the use of adhesives.

The facility has option to use contact adhesives in product process and is required to be in compliance with the above requirements. Using contact adhesives to repair truck headliners etc. would fall under 02Q .0503(7), janitorial products. It is not considered product process and won't be included in the permit.

3. On page 10 of the permit – Revise the following statement: "The gauge has an indicator range from 0.0 to 10.0 inches of water and has an accuracy of plus or minus 2 percent of full scale**, and 70°F**" to state "The gauge has an indicator range from 0.0 to 10.0 inches of water and has an accuracy of plus or minus 2 percent of full scale **at 70°F**"
   Revised the statement in Section 2.1 B.3.c to "The gauge has an indicator range from 0.0 to 10.0 inches of water and has an accuracy of plus or minus 2 percent of full scale at 70°F"

4. On page 23 of the permit – Revise the following statement in 2.2.A.2.c: "At the request of the Permittee, the Permittee shall comply with the following for all the sources listed in Table 2.2.A." to "At the request of the Permittee, the Permittee shall comply with the following for sources **ID Nos. SBB1 through SBB20**."
   Revised the statement in Section 2.2 A.2.c to "the Permittee shall comply with the following for the sources (ID Nos. SBB1 through SBB20)."

5. On page 23 of the permit – Revise the following statement in 2.2.A.2.d.i: "the monthly VOC emissions from the sources listed in Table 2.2.A for the previous 17 months." to "the monthly VOC emissions from the sources **ID Nos. SBB1 through SBB20** for the previous 17 months."
   Revised the statement in Section 2.2 A.2.d.i to "the monthly VOC emissions from the sources (ID Nos. SBB1 through SBB20) for the previous 17 months."

5400187.22A Attachment 1

From:	Sally Gaines
To:	Xiao, Chengqing; George Lemerise
Cc:	Scotty Kelly; Jones, Jerry R; Huddleston, Betsy; Parekh, Samir; Braswell, Russell; Thaker, Rahul
Subject:	[External] RE: Permit draft review - Title V air permit renewal application (5400187.22A) for MasterBrand Cabinets, Inc. - Kinston Plant #9
Date:	Friday, December 6, 2024 5:38:45 PM
Attachments:	image001.png image002.png MasterBrand Cabinets LLC - Kinston Plant #9 Air Permit No. 08804T14_22A 20241121 draft rev.docx

Mr. Xiao –

Thank you for the opportunity to provide a review and comments.

Comments:

- On page 10 of the permit – Revise the following statement: "The gauge has an indicator range from 0.0 to 10.0 inches of water and has an accuracy of plus or minus 2 percent of full scale**, and 70°F**" to state "The gauge has an indicator range from 0.0 to 10.0 inches of water and has an accuracy of plus or minus 2 percent of full scale **at 70°F**"

- On page 23 of the permit – Revise the following statement in 2.2.A.2.c: "At the request of the Permittee, the Permittee shall comply with the following for all the sources listed in Table 2.2.A." to "At the request of the Permittee, the Permittee shall comply with the following for sources **ID Nos. SBB1 through SBB20**."

- On page 23 of the permit – Revise the following statement in 2.2.A.2.d.i: "the monthly VOC emissions from the sources listed in Table 2.2.A for the previous 17 months." to "the monthly VOC emissions from the sources **ID Nos. SBB1 through SBB20** for the previous 17 months.."

The suggested changes provided in the comments above are shown as "track changes" in the attached permit draft.

Please let us know if you have any questions.

Sally Gaines
Environmental Manager

From:	Xiao, Chengqing
To:	Sally Gaines; George Lemerise
Cc:	Scotty Kelly; Jones, Jerry R; Huddleston, Betsy; Parekh, Samir; Braswell, Russell; Thaker, Rahul
Subject:	RE: [External] RE: Permit draft review - Title V air permit renewal application (5400187.22A) for MasterBrand Cabinets, Inc. - Kinston Plant #9
Date:	Tuesday, November 26, 2024 12:54:00 PM
Attachments:	image001.png image002.png

Good afternoon Ms. Gaines,

Per the discussion with my supervisor Mr. Thaker, and Mr. Braswell, we agree the extension to the close of Friday, December 6, 2024 for the 2nd round of permit draft review.

Thank you all and happy Thanksgiving!

Chengqing

Chengqing Xiao (he/him/his)
Environmental Engineer, Division of Air Quality
North Carolina Department of Environmental Quality
Office: (919) 707-8476
Chengqing.xiao@deq.nc.gov

From: Sally Gaines <SGaines@masterbrand.com>
Sent: Tuesday, November 26, 2024 12:15 PM
To: Xiao, Chengqing <chengqing.xiao@deq.nc.gov>; George Lemerise <GLemerise@masterbrand.com>
Cc: Scotty Kelly <SKelly@masterbrand.com>; Jones, Jerry R <Randall.Jones@deq.nc.gov>; Huddleston, Betsy <betsy.huddleston@deq.nc.gov>; Parekh, Samir <samir.parekh@deq.nc.gov>; Braswell, Russell <russell.braswell@deq.nc.gov>; Thaker, Rahul <rahul.thaker@deq.nc.gov>
Subject: [External] RE: Permit draft review - Title V air permit renewal application (5400187.22A) for MasterBrand Cabinets, Inc. - Kinston Plant #9

Due to the holiday week and a lot of personnel being on leave, we are requesting an extension to the review of the permit draft.

We are requesting an extension to December 6th for the permit review.

Please let me know if this extension is approved.

Sally Gaines
Environmental Manager

C: 812-639-2940
One MasterBrand Cabinets Drive, Jasper, IN 47546
www.masterbrand.com

MASTERBRAND

From: Xiao, Chengqing <chengqing.xiao@deq.nc.gov>
Sent: Thursday, November 21, 2024 1:01 PM
To: George Lemerise <GLemerise@masterbrand.com>
Cc: Scotty Kelly <SKelly@masterbrand.com>; Sally Gaines <SGaines@masterbrand.com>; Jones, Jerry R <Randall.Jones@deq.nc.gov>; Huddleston, Betsy <betsy.huddleston@deq.nc.gov>; Parekh, Samir <samir.parekh@deq.nc.gov>; Braswell, Russell <russell.braswell@deq.nc.gov>; Thaker, Rahul <rahul.thaker@deq.nc.gov>
Subject: RE: Permit draft review - Title V air permit renewal application (5400187.22A) for MasterBrand Cabinets, Inc. - Kinston Plant #9

Good afternoon Mr. Lemerise,

Please find the attached draft permit and the supporting legal basis for your review again. DAQ made the additions/updates in both documents including (1) processing the 502(b)(10) Notification request (5400187.24B received November 4, 2024); (2) processing the name change application (5400187.24A received November 7, 2024); (3) adding requirements for contact adhesive operation; (4) addressing the permit draft review comments from the facility, DAQ WaRO and DAQ Technical Service Section.

Please review these documents carefully and email me any comments or changes you

may have by the close of Monday, December 2, 2024. DAQ looks forward to hearing from you on the above draft documents and starting the required public participation and EPA review soon.

Thank you all for the help!

Chengqing

Chengqing Xiao (he/him/his)
Environmental Engineer, Division of Air Quality
North Carolina Department of Environmental Quality
Office: (919) 707-8476
Chengqing.xiao@deq.nc.gov

From:	Scotty Kelly
To:	Xiao, Chengqing
Cc:	Sally Gaines; Alex Tomash; George Lemerise; Braswell, Russell; Thaker, Rahul
Subject:	RE: [External] RE: Permit draft review - Title V air permit renewal application (5400187.22A) for MasterBrand Cabinets, Inc. - Kinston Plant #9
Date:	Thursday, November 14, 2024 2:15:41 PM
Attachments:	image003.png image004.png image005.png

Chengqing,

I have reviewed the information below with Sally and the information in question below is accurate.

Thanks,

Scotty Kelly
Sr. EHS Specialist

252-559-2503(O)
252-624-1047(C)
651 Collier Loftin Road
Kinston N.C., 28504
www.masterbrand.com

From: Xiao, Chengqing <chengqing.xiao@deq.nc.gov>
Sent: Thursday, November 14, 2024 11:53 AM
To: Scotty Kelly <SKelly@masterbrand.com>
Cc: Sally Gaines <SGaines@masterbrand.com>; Alex Tomash <ATomash@masterbrand.com>; George Lemerise <GLemerise@masterbrand.com>; Braswell, Russell <russell.braswell@deq.nc.gov>; Thaker, Rahul <rahul.thaker@deq.nc.gov>
Subject: RE: [External] RE: Permit draft review - Title V air permit renewal application (5400187.22A) for MasterBrand Cabinets, Inc. - Kinston Plant #9

Good morning Mr. Kelly,

As we spoke on the phone this morning, please confirm the following:

- The new 502(b)(10) Notification received by DAQ on 11/04/2024 requested to replace the existing bagfilters (BH-2 and BH-3) with one new Torit 484-RF-12 Dust

Collector (ID: BH-3). After this replacement, there will be seven bagfiters (ID Nos. BH-1, BH-3 through BH-8) listed in the permit.

- Under permit condition 15A NCAC 02D .0614: COMPLIANCE ASSURANCE MONITORING in the table of Section B.3.c, for the Indicator Range [40 CFR 64.6(c)(2)], it states that "An excursion is defined as a pressure drop greater than 8.0" H_2O or less than 0.5" H_2O. (ID Nos. BH-1 through BH-5)". The indicator range was requested by the facility in the permit renewal application (5400187.22A) received by DAQ on 06/03/2022. Does the facility continue to use the same pressure drop range, i.e., greater than 8.0" H_2O or less than 0.5" H_2O for bagfilters (ID Nos. BH-1, BH-3 through BH-5) after bagfilter replacement?

Thanks for your assistance.

Chengqing

Chengqing Xiao (he/him/his)
Environmental Engineer, Division of Air Quality
North Carolina Department of Environmental Quality
Office: (919) 707-8476
Chengqing.xiao@deq.nc.gov

From: Xiao, Chengqing
Sent: Thursday, November 7, 2024 4:37 PM
To: 'Sally Gaines' <SGaines@masterbrand.com>; Scotty Kelly <SKelly@masterbrand.com>
Cc: Jones, Jerry R <Randall.Jones@deq.nc.gov>; Huddleston, Betsy <betsy.huddleston@deq.nc.gov>; Braswell, Russell <russell.braswell@deq.nc.gov>; Thaker, Rahul <rahul.thaker@deq.nc.gov>; Alex Tomash <ATomash@masterbrand.com>; George Lemerise <GLemerise@masterbrand.com>
Subject: RE: [External] RE: Permit draft review - Title V air permit renewal application (5400187.22A) for MasterBrand Cabinets, Inc. - Kinston Plant #9

Good afternoon Ms. Gaines and Mr. Kelly

Russell, Rahul and I discussed the technical additional information you provided regarding contact adhesive used at the facility. We believe that the repair of cabinet parts is considered product process operation. Per your request, the Contact Adhesive Operations under Section 2.2.B.8 on page 25 of the permit draft will be revised as following:

- The statement of "The Permittee shall not use contact adhesives as defined in 40 CFR 63.801." will be removed
- The following requirements will be added to the permit draft:

i. **Emission Limits** - The Permittee shall comply with all provisions of 40 CFR 63.802(a)(2) and 63.804(b-c) as applicable to the contact adhesive operations **(ID No. ###)** as detailed in the following table:

Emission Source	Regulated material	Emission Limitation
ID No.	all other contact adhesives	1.0 kg VHAP per kg solids (1.0 lb VHAP per lb solids), as applied

ii. **Compliance Procedures and Monitoring Requirements** - When emission source **(ID No. ###)** is using foam and other contact adhesives, the Permittee shall demonstrate that only compliant adhesives are used in accordance with 40 CFR 63.804(g)(5).

iii. **Performance Test Method** - EPA Method 311 [40 CFR Part 63 Appendix A] shall be used to determine the VHAP content of liquid coatings in foam and other contact adhesives in accordance with 40 CFR 63.805(a).

iv. **Recordkeeping Requirements** - When foam and other contact adhesives are used, the Permittee shall keep records in accordance with 40 CFR 63.806(a) following the applicability criteria in 40 CFR 63.800(d), 63.806(b)(1) and (b)(2), 63.806(h), 63.806(i), and 63.806(j).

v. **Reporting Requirements** - When foam and other adhesives are used, the Permittee shall submit the compliance status report to the Regional Supervisor in accordance with 40 CFR 63.804(f)(5) and 63.807(b). When foam and other contact adhesives are used, the Permittee shall submit semiannual reports to the Regional Supervisor in accordance with 40 CFR 63.804(g)(5) and 63.807(c). When foam and other contact adhesives are used, the Permittee shall follow the requirements in 40 CFR 63.807(a) following the applicability criteria in 40 CFR 63.800(d).

- The repair stations will be listed as an emission source (Assigned source ID: ES-RS) with a description of "Adhesive application for product repair" to cover the use of adhesives. Please let me know whether you agree to use ES-RS as source ID or use another source ID.

The facility has option to use contact adhesives in product process and is required to be in compliance with the above requirements. Using contact adhesives to repair truck headliners etc. would fall under 02Q .0503(7), janitorial products. It is not considered product process and won't be included in the permit. Please let me know whether you have any other comments for the permit draft review.

The new 502(b)(10) Request received 11/04/2024 regarding replacement of the existing

bagfilter (BH-2 and BH-3) with one new Torit 484-RF-12 Dust Collector (ID: BH-3) will be consolidated into the currently processed renewal application 5400187.22A received 06/03/2022. As mentioned in my 11/05/2024 email, please submit the requested Forms C1 and D5 as soon as possible. Another permit draft will be sent to you all for your review after this 502(b)(10) Request has been processed.

Please feel free to contact me if you have any questions. Thanks for your assistance.

Chengqing

Chengqing Xiao (he/him/his)
Environmental Engineer, Division of Air Quality
North Carolina Department of Environmental Quality
Office: (919) 707-8476
Chengqing.xiao@deq.nc.gov

From: Sally Gaines <SGaines@masterbrand.com>
Sent: Tuesday, November 5, 2024 5:29 PM
To: Xiao, Chengqing <chengqing.xiao@deq.nc.gov>
Cc: Jones, Jerry R <Randall.Jones@deq.nc.gov>; Huddleston, Betsy <betsy.huddleston@deq.nc.gov>; Braswell, Russell <russell.braswell@deq.nc.gov>; Thaker, Rahul <rahul.thaker@deq.nc.gov>; Alex Tomash <ATomash@masterbrand.com>; George Lemerise <GLemerise@masterbrand.com>; Scotty Kelly <SKelly@masterbrand.com>
Subject: RE: [External] RE: Permit draft review - Title V air permit renewal application (5400187.22A) for MasterBrand Cabinets, Inc. - Kinston Plant #9

Chengqing –

We are requesting a revision or removal of the following statement that was added to the renewal permit draft on page 25 in Section 2.2.B.8:

Contact Adhesive Operations

8. The Permittee shall not use contact adhesives as defined in 40 CFR 63.801.

With regards to our production processes, we have determined that we are currently

using contact adhesives in the repair of cabinet parts that do not pass quality standards. Instead of disposing of the cabinet part as waste, we can adequately repair it for use in a cabinet using the contact adhesive products.

SDSs for the adhesive products in use are attached. A technical data sheet for one of the products (M745-2012) is also attached. The manufacturer did not provide technical data sheets for the other two products.

There are several repair stations within the plant. The contact adhesive products are used in small quantities at those repair stations.

Summary of usage based on a typical calendar month:

Product	Container Size	Quantity/Month	Monthly Usage	Annual Usage
M745-1310	8 oz	2 bottles	16 oz	192 oz
M745-1260	2 oz	20 bottles	40 oz	480 oz
M745-2012	13 oz aerosol	20 cans	260 oz	3,120 oz

We are continuing to review the products used by our maintenance team to maintain the facility. A review of products in the maintenance area over the last few days did not find any contact adhesives. My concern is that we could have a need to use contact adhesives to repair/glue a sagging headliner on a truck or to glue together a new cart to transfer cabinet parts between production areas. These are not cabinet production uses, but a limited use of contact adhesives that may be purchased at a local hardware store.

Thank you for your assistance and the opportunity to provide comments on the draft permit. Please contact me or Scotty Kelly if you have further questions.

Sally Gaines
Environmental Manager

C: 812-639-2940
One MasterBrand Cabinets Drive, Jasper, IN 47546
www.masterbrand.com

MASTERBRAND

From: Xiao, Chengqing <Chengqing.xiao@deq.nc.gov>
Sent: Friday, November 1, 2024 10:50 AM
To: Scotty Kelly <SKelly@masterbrand.com>; Sally Gaines <SGaines@masterbrand.com>
Cc: Jones, Jerry R <Randall.Jones@deq.nc.gov>; Huddleston, Betsy <betsy.huddleston@deq.nc.gov>; Braswell, Russell <russell.braswell@deq.nc.gov>; Thaker, Rahul <rahul.thaker@deq.nc.gov>; Alex Tomash <ATomash@masterbrand.com>; George Lemerise <GLemerise@masterbrand.com>
Subject: RE: [External] RE: Permit draft review - Title V air permit renewal application (5400187.22A) for MasterBrand Cabinets, Inc. - Kinston Plant #9

Good morning Ms. Gaines,

Per our phone conversation this morning, the following things were discussed.

- The permittee will complete the review of permit draft and send NC DAQ the review comments by the close of business on Tuesday, November 5, 2024.
- The permittee name is “MasterBrand Cabinets LLC - Kinston Plant #9”
- The facility may use a small amount of contact adhesives for maintenance. You will provide brief information about the contact adhesive usage per year, chemical names (SDSs), what maintenance is contact adhesives being used etc. Based on the information provided, DAQ will evaluate whether contact adhesives being used is a process operation.
- I will fix the page number inconsistency in the summary of the changes table.

Thank you for your phone call and the assistance. Please feel free to contact me if you have any other questions.

Have a nice weekend!

Chengqing

Chengqing Xiao (he/him/his)
Environmental Engineer, Division of Air Quality
North Carolina Department of Environmental Quality
Office: (919) 707-8476
Chengqing.xiao@deq.nc.gov

From: Xiao, Chengqing
Sent: Thursday, October 31, 2024 3:55 PM
To: Scotty Kelly <SKelly@masterbrand.com>; Sally Gaines <SGaines@masterbrand.com>
Cc: Parekh, Samir <samir.parekh@deq.nc.gov>; Jones, Jerry R <Randall.Jones@deq.nc.gov>; Huddleston, Betsy <betsy.huddleston@deq.nc.gov>; Braswell, Russell <russell.braswell@deq.nc.gov>; Thaker, Rahul <rahul.thaker@deq.nc.gov>; Alex Tomash <ATomash@masterbrand.com>; George Lemerise <GLemerise@masterbrand.com>
Subject: RE: [External] RE: Permit draft review - Title V air permit renewal application (5400187.22A) for MasterBrand Cabinets, Inc. - Kinston Plant #9

Hi Scotty,

You have the correct mailing address.

Mark Cuilla
Chief, Permitting Section
NCDEQ – Division of Air Quality
1641 Mail Service Center
Raleigh, NC 27669-1641

Just want to verify, based on the revised Form A you emailed, is the permittee name "MasterBrand Cabinets LLC - Kinston Plant #9"? In addition, can you give us an update about the status of permit draft review?

Thanks,

Chengqing

Chengqing Xiao (he/him/his)
Environmental Engineer, Division of Air Quality
North Carolina Department of Environmental Quality
Office: (919) 707-8476
Chengqing.xiao@deq.nc.gov

From: Scotty Kelly <SKelly@masterbrand.com>
Sent: Thursday, October 31, 2024 3:33 PM
To: Xiao, Chengqing <chengqing.xiao@deq.nc.gov>; Sally Gaines <SGaines@masterbrand.com>
Cc: Parekh, Samir <samir.parekh@deq.nc.gov>; Jones, Jerry R <Randall.Jones@deq.nc.gov>; Huddleston, Betsy <betsy.huddleston@deq.nc.gov>; Braswell, Russell <russell.braswell@deq.nc.gov>; Thaker, Rahul <rahul.thaker@deq.nc.gov>; Alex Tomash <ATomash@masterbrand.com>; George Lemerise <GLemerise@masterbrand.com>
Subject: RE: [External] RE: Permit draft review - Title V air permit renewal application (5400187.22A) for MasterBrand Cabinets, Inc. - Kinston Plant #9

Chengqing,

I have attached a signed copy of Form A(name change) for the Kinston MasterBrand facility Title V Air Permit. I will also be mailing a hard copy as well.

The address I have to mail a copy to is:

NCDEQ – Division of Air Quality
1641 Mail Service Center
Raleigh, NC 27669-1641

Can you advise if that is the correct address?

Thanks,

Scotty Kelly
Sr. EHS Specialist

252-559-2503(O)
252-624-1047(C)
651 Collier Loftin Road
Kinston N.C., 28504
www.masterbrand.com

MASTERBRAND

From: Xiao, Chengqing <chengqing.xiao@deq.nc.gov>

Sent: Monday, October 28, 2024 5:05 PM
To: Scotty Kelly <SKelly@masterbrand.com>; Sally Gaines <SGaines@masterbrand.com>
Cc: Parekh, Samir <samir.parekh@deq.nc.gov>; Jones, Jerry R <Randall.Jones@deq.nc.gov>; Huddleston, Betsy <betsy.huddleston@deq.nc.gov>; Braswell, Russell <russell.braswell@deq.nc.gov>; Thaker, Rahul <rahul.thaker@deq.nc.gov>; Alex Tomash <ATomash@masterbrand.com>; George Lemerise <GLemerise@masterbrand.com>
Subject: RE: [External] RE: Permit draft review - Title V air permit renewal application (5400187.22A) for MasterBrand Cabinets, Inc. - Kinston Plant #9

Good afternoon Mr. Kelly and Ms. Gaines,

It is okay for the permittee to extend an additional week to close of business on October 31st, 2024 to complete the review of permit draft. I was out of office for CAPCA conference on Thursday and Friday last week. I apologize for the late reply.

For Comment 1:
Regarding the permittee name, please resubmit a Form A with the correct Legal Corporate/Owner Name. Please email me the revised Form A and mail the hard copy to DAQ. I will update the permittee name on permit and DAQ file system based on the revised Form A.

For Comment 2:
I corrected it to page 9.

For Comment 3: Initial performance test of ID No. ES-PS.
According to a Memorandum sent by DAQ Stationary Source Compliance Branch (SSCB) on October 17, 2014, the stack test was performed on February 10, 2014, and compliance was indicated. Per the discussion with Mr. Russell Braswell, Environmental Engineer III, Division of Air Quality, the Section 2.1 D.4.i.ii in the new permit will be updated to "The Permittee shall conduct the initial performance test within 180 days of the compliance date according to the provisions in 40 CFR 63.7(a)(2). [40 CFR 63.6610(a)]. *This requirement has been met*."

Thank you for your assistance and please let me know if you have any questions.

Chengqing

Chengqing Xiao (he/him/his)
Environmental Engineer, Division of Air Quality
North Carolina Department of Environmental Quality
Office: (919) 707-8476
Chengqing.xiao@deq.nc.gov

From: Sally Gaines <SGaines@masterbrand.com>
Sent: Thursday, October 24, 2024 4:42 PM
To: Xiao, Chengqing <chengqing.xiao@deq.nc.gov>
Cc: Parekh, Samir <samir.parekh@deq.nc.gov>; Jones, Jerry R <Randall.Jones@deq.nc.gov>; Huddleston, Betsy <betsy.huddleston@deq.nc.gov>; Braswell, Russell <russell.braswell@deq.nc.gov>; Thaker, Rahul <rahul.thaker@deq.nc.gov>; Alex Tomash <ATomash@masterbrand.com>; Scotty Kelly <SKelly@masterbrand.com>; George Lemerise <GLemerise@masterbrand.com>
Subject: [External] RE: Permit draft review - Title V air permit renewal application (5400187.22A) for MasterBrand Cabinets, Inc. - Kinston Plant #9

Chengqing –

Today, we requested an additional week to complete our review. I don't want to miss the deadline that we previously agreed to, so I am sending a few comments in this message. If it is possible, we would still like a few more days to finish our review.

Comment 1: Permittee Name: MasterBrand Cabinets, Inc. – Kinston Plant #9
MasterBrand Cabinets, Inc. changed their name to MasterBrand Cabinets LLC in December 2022. Please update the permittee to reflect the new name.

Comment 2: Page noting Summary of Changes to Permit
References to updating language in Section 2.1 B.2.c. and 2.1 B.3.c are on page 9 of the permit, not page 8.

Comment 3: Initial performance test of ID No. ES-PS

In the permit renewal, Section 2.1 D.4. i. ii. "The permittee shall conduct the initial performance test within 180 days after May 3, 2013 and according to the provisions in 40 CFR 63.7(a)(2)." In the previous permit, at 2.1 D.4. n.ii. the correlating statement read "The Permittee conducted its initial performance test on February 10, 2014 according to the provisions in 40 CFR 63.7(a)(2)."
Shouldn't the new permit also reference the testing date on February 10, 2014?

Thank you for your assistance and please let us know if you have any questions.

Sally Gaines
Environmental Manager

C: 812-639-2940
One MasterBrand Cabinets Drive, Jasper, IN 47546
www.masterbrand.com

MASTERBRAND

From: Scotty Kelly <SKelly@masterbrand.com>
Sent: Thursday, October 24, 2024 2:31 PM
To: Xiao, Chengqing <chengqing.xiao@deq.nc.gov>; George Lemerise <GLemerise@masterbrand.com>
Cc: Parekh, Samir <samir.parekh@deq.nc.gov>; Jones, Jerry R <Randall.Jones@deq.nc.gov>; Huddleston, Betsy <betsy.huddleston@deq.nc.gov>; Braswell, Russell <russell.braswell@deq.nc.gov>; Thaker, Rahul <rahul.thaker@deq.nc.gov>; Sally Gaines <SGaines@masterbrand.com>; Alex Tomash <ATomash@masterbrand.com>
Subject: RE: Permit draft review - Title V air permit renewal application (5400187.22A) for MasterBrand Cabinets, Inc. - Kinston Plant #9

Chengquing,

I would like to request an additional week to complete the review of the permit. Would it be possible to extend the review time to close of business on October 31st, 2024?

Thanks,

Scotty Kelly
Sr. EHS Specialist

252-559-2503(O)
252-624-1047(C)

651 Collier Loftin Road
Kinston N.C., 28504
www.masterbrand.com

MASTERBRAND

From: Scotty Kelly
Sent: Wednesday, October 16, 2024 1:10 PM
To: Xiao, Chengqing <chengqing.xiao@deq.nc.gov>; George Lemerise <GLemerise@masterbrand.com>
Cc: Parekh, Samir <samir.parekh@deq.nc.gov>; Jones, Jerry R <Randall.Jones@deq.nc.gov>; Huddleston, Betsy <betsy.huddleston@deq.nc.gov>; Braswell, Russell <russell.braswell@deq.nc.gov>; Thaker, Rahul <rahul.thaker@deq.nc.gov>; Sally Gaines <SGaines@masterbrand.com>; Alex Tomash <ATomash@masterbrand.com>
Subject: RE: Permit draft review - Title V air permit renewal application (5400187.22A) for MasterBrand Cabinets, Inc. - Kinston Plant #9

Chengquing,

After communicating with my corporate environmental representative, we would like to have an additional week to further review the permit information. Can you advise if this request is approved?

Thanks,

Scotty Kelly
Sr. EHS Specialist

252-559-2503(O)
252-624-1047(C)
651 Collier Loftin Road
Kinston N.C., 28504
www.masterbrand.com

MASTERBRAND

From: Xiao, Chengqing <chengqing.xiao@deq.nc.gov>
Sent: Wednesday, October 9, 2024 3:59 PM
To: George Lemerise <GLemerise@masterbrand.com>
Cc: Scotty Kelly <SKelly@masterbrand.com>; Parekh, Samir <samir.parekh@deq.nc.gov>; Jones, Jerry R <Randall.Jones@deq.nc.gov>; Huddleston, Betsy <betsy.huddleston@deq.nc.gov>; Braswell, Russell <russell.braswell@deq.nc.gov>; Thaker, Rahul <rahul.thaker@deq.nc.gov>
Subject: Permit draft review - Title V air permit renewal application (5400187.22A) for MasterBrand Cabinets, Inc. - Kinston Plant #9

links or open attachments contained in this email.

Good afternoon Mr. Lemerise,

I have attached the draft permit and the supporting legal basis. Please review these documents carefully and email me any comments or changes you may have by the close of October 17, 2024. If you need additional time for this review, please let me know. DAQ looks forward to hearing from you on the above draft documents and starting the required public participation and EPA review soon.

Samir,

There are minor changes to the CAM plan as requested in application 5400187.22A.

Thank you all for the help!

Chengqing

Chengqing Xiao (he/him/his);
Environmental Engineer, Division of Air Quality
North Carolina Department of Environmental Quality
Office: (919) 707-8476
Chengqing.xiao@deq.nc.gov

From: Scotty Kelly
To: Xiao, Chengqing
Subject: Re: [External] Kinston MasterBrand Air Permit Forms
Date: Tuesday, October 1, 2024 11:36:03 AM
Attachments: image001.png
image002.png
Outlook-cidimage00.png

My apologies for the delayed response. In regard to your email about PFAS in our finishing materials, we do not use or emit any PFAS in our finish materials.

Thanks,

Scotty Kelly
Sr. EHS Specialist

252-559-2503(O)
252-624-1047(C)
651 Collier Loftin Road
Kinston N.C., 28504
www.masterbrand.com

MASTERBRAND

From: Xiao, Chengqing <chengqing.xiao@deq.nc.gov>
Sent: Wednesday, September 25, 2024 11:17 AM
To: Scotty Kelly <SKelly@masterbrand.com>
Subject: RE: [External] Kinston MasterBrand Air Permit Forms

Good morning Scotty,

I almost finish the technical review. For the permit renewal application, DAQ requires to ask the facility on fluorinated compounds (e.g., PFAS) uses and emissions. Please evaluate whether MasterBrand Cabinets, Inc. – Kinston Plant #9 uses any chemicals (coating, paint etc.) containing/emitting any fluorinated compounds and make a statement via email if the facility does not use/emit any fluorinated compounds (PFAS).

Please feel free to contact me if you have any questions.

Thanks,

Chengqing

Chengqing Xiao (he/him/his)
Environmental Engineer, Division of Air Quality
North Carolina Department of Environmental Quality
Office: (919) 707-8476
Chengqing.xiao@deq.nc.gov

From: Scotty Kelly <SKelly@masterbrand.com>
Sent: Wednesday, September 4, 2024 10:16 AM
To: Xiao, Chengqing <chengqing.xiao@deq.nc.gov>
Subject: RE: [External] Kinston MasterBrand Air Permit Forms

Mr. Xaio,

Our facility does not have a process that uses contact adhesion. We have a laminator that puts paper on the wood but do not have a contact adhesion process.

Thanks,

Scotty Kelly
Sr. EHS Specialist

252-559-2503(O)
252-624-1047(C)
651 Collier Loftin Road
Kinston N.C., 28504
www.masterbrand.com

MASTERBRAND

From: Xiao, Chengqing <chengqing.xiao@deq.nc.gov>
Sent: Thursday, August 22, 2024 5:30 PM
To: Scotty Kelly <SKelly@masterbrand.com>
Subject: RE: [External] Kinston MasterBrand Air Permit Forms

Hello Scotty,

I have one more question for you. Does the facility have any contact adhesive operations? Please let me know.

Thanks,

Chengqing

Chengqing Xiao (he/him/his)
Environmental Engineer, Division of Air Quality
North Carolina Department of Environmental Quality
Office: (919) 707-8476
Chengqing.xiao@deq.nc.gov

From: Xiao, Chengqing
Sent: Thursday, August 22, 2024 2:18 PM
To: Scotty Kelly <SKelly@masterbrand.com>
Cc: Amigó, Maria <maria.amigo@wsp.com>; Alex Tomash <ATomash@masterbrand.com>
Subject: RE: [External] Kinston MasterBrand Air Permit Forms

Good afternoon Scotty,

Please see attached PDF files. On the cover letter of the Title V permit renewal application received on June 3, 2022, the facility requested to modify the acceptable indicator ranges for bagfilters BH-1 through BH-5 from 0.5" H_2O to 8.0" H_2O. On the Form C1 for BH-4 and BH-5 received on July 9, 2024, the pressure drop ranges are

between 0.5” H_2O and 5.0” H_2O. If the correct pressure ranges should be from 0.5” H_2O to 8.0” H_2O, please revise the Form C1 for BH-4 and BH-5 bagfilters and resubmit the forms as soon as you can.

Please let me know if you have any questions.

Thanks,

Chengqing

Chengqing Xiao (he/him/his)
Environmental Engineer, Division of Air Quality
North Carolina Department of Environmental Quality
Office: (919) 707-8476
Chengqing.xiao@deq.nc.gov

From: Scotty Kelly <SKelly@masterbrand.com>
Sent: Tuesday, August 20, 2024 8:23 AM
To: Xiao, Chengqing <chengqing.xiao@deq.nc.gov>
Cc: Amigó, Maria <maria.amigo@wsp.com>; Alex Tomash <ATomash@masterbrand.com>
Subject: RE: [External] Kinston MasterBrand Air Permit Forms

The generator is a peak shaving generator only and does not supply electricity to our facility. It is used by the City of Kinston.

Thanks,

Scotty Kelly
Sr. EHS Specialist

252-559-2503(O)
252-624-1047(C)
651 Collier Loftin Road
Kinston N.C., 28504

www.masterbrand.com

MASTERBRAND

From: Xiao, Chengqing <chengqing.xiao@deq.nc.gov>
Sent: Monday, August 19, 2024 4:06 PM
To: Scotty Kelly <SKelly@masterbrand.com>
Subject: RE: [External] Kinston MasterBrand Air Permit Forms

Good afternoon Scotty,

I have a question about the permitted source – diesel-fired generator (ID No. ES-PS). In the current permit 08804/T13 issued 09/09/2020, the diesel-fired generator (1,000 kW electrical output, 1,447 brake horsepower engine output) has the source description of "diesel-fired emergency and peak shaving generator". Please specify what purpose the facility uses this generator.

Thanks,

Chengqing

Chengqing Xiao (he/him/his)
Environmental Engineer, Division of Air Quality
North Carolina Department of Environmental Quality
Office: (919) 707-8476
Chengqing.xiao@deq.nc.gov

From: Scotty Kelly <SKelly@masterbrand.com>
Sent: Monday, July 8, 2024 2:03 PM
To: Xiao, Chengqing <chengqing.xiao@deq.nc.gov>
Subject: RE: [External] Kinston MasterBrand Air Permit Forms

Chengqing,

Good afternoon. We do not emit any 1-bromopropane (CAS 106-94-5).

Thanks,

Scotty Kelly
Sr. EHS Specialist

252-559-2503(O)
252-624-1047(C)
651 Collier Loftin Road
Kinston N.C., 28504
www.masterbrand.com

MASTERBRAND

From: Xiao, Chengqing <chengqing.xiao@deq.nc.gov>
Sent: Wednesday, July 3, 2024 11:40 AM
To: Scotty Kelly <SKelly@masterbrand.com>
Subject: RE: [External] Kinston MasterBrand Air Permit Forms

Good morning Scotty,

Thank you for emailing me the air permit forms required for this permit renewal/modification application. I have one more question below for you.

EPA has added 1-bromopropane (CAS 106-94-5) to the HAP list on January 5, 2022. Please provide the information whether MasterBrand Cabinets, Inc. - Kinston Plant #9 emits 1-bromopropane. If it does, please provide the emissions rates including both on actual and PTE basis.

Please feel free to contact me if you have any questions.

Thank you!

Chengqing

From: Amigo, Maria
To: Xiao, Chengqing
Cc: Scotty Kelly; Alex Tomash
Subject: RE: [External] Kinston MasterBrand Air Permit Forms
Date: Thursday, July 25, 2024 11:41:23 AM
Attachments: image002.png
image003.png
image004.png
D1-MasterBrand Kinston with changes.pdf

Here is the file that was missing from the original email.

Maria

Maria Amigó
Senior Chemical Engineer

T+ 1 919-946-9722

WSP USA
4021 Stirrup Creek Drive, Suite 100
Durham, NC 27703
USA

wsp.com

From: Xiao, Chengqing <chengqing.xiao@deq.nc.gov>
Sent: Thursday, July 25, 2024 11:34 AM
To: Amigo, Maria <maria.amigo@wsp.com>
Cc: Scotty Kelly <SKelly@masterbrand.com>; Alex Tomash <ATomash@masterbrand.com>
Subject: RE: [External] Kinston MasterBrand Air Permit Forms

Good morning Maria,

I don’t see the Form D1 attached to the email you just sent. Please check and resend an email, thanks.

Chengqing

Chengqing Xiao (he/him/his)
Environmental Engineer, Division of Air Quality
North Carolina Department of Environmental Quality
Office: (919) 707-8476
Chengqing.xiao@deq.nc.gov

From: Amigo, Maria <maria.amigo@wsp.com>
Sent: Thursday, July 25, 2024 11:27 AM
To: Xiao, Chengqing <chengqing.xiao@deq.nc.gov>
Cc: Scotty Kelly <SKelly@masterbrand.com>; Alex Tomash <ATomash@masterbrand.com>
Subject: [External] Kinston MasterBrand Air Permit Forms

Good morning Chengqing,

Our responses to your requests are presented below and an updated version of form D1 is attached. Please let us know if you have any further questions.

V/r,

Maria

Maria Amigó
Senior Chemical Engineer

T+ 1 919-946-9722

WSP USA
4021 Stirrup Creek Drive, Suite 100
Durham, NC 27703
USA

wsp.com

The hard copies of the requested forms listed in the email below were received on 07/09/2024. My supervisor Mr. Rahul Thaker and I discussed the forms and have some questions about the facility-Wide Emissions data on the Form D1. Please check the following emissions data, make correction as needed and resubmit Form D1.

- The VOC Potential Emissions (After Controls) are estimated as 250.00 tons/yr. In

the current permit No. 08804T13, the VOC limits for the “Twenty dry filter-type spray booths (ID Nos. SBB1 through SBB20 only)” under Section 2.2 A on Page 18 are “Less than 620 tons per consecutive 12-month period”. So the facility-Wide VOC emissions 250 tons/yr. don’t look like correct. Please check this data and re-evaluate the facility-wide VOC potential emissions (before and after controls)

    - **Form D1 has been updated to reflect the 620 tons/yr VOC limit identified in the permit.**

- The Potential Emissions rates (Before Controls) for NOx, CO and SO2 should be same numbers as the Potential Emissions (After Controls) because there are no control devices associated with the emission sources for these three pollutants at the facility. Please fill out the Potential Emissions rates (Before Controls) on Form D1 for NOx, CO and SO2.
    - **The Potential Emissions rates (Before Controls) for NOx, CO and SO2 have been incorporated into Form D1 per your guidance.**
- The Potential Emissions rates (Before Controls) for PM/PM10/PM2.5 can be back calculated from the Potential Emissions rates (After Controls). Please estimate and fill out the PM/PM10/PM2.5 Potential Emissions rates (Before Controls) on Form D1.
    - **PM/PM10/PM2.5 Potential Emissions rates (Before Controls) values have been estimated and entered on Form D1. The particulate emissions are primarily generated by source G-75 Sawdust Collection.**

Please feel free to contact me if you have any questions.

Thank you for the help and have a nice weekend!

Chengqing

Chengqing Xiao (he/him/his)
Environmental Engineer, Division of Air Quality
North Carolina Department of Environmental Quality
Office: (919) 707-8476
Chengqing.xiao@deq.nc.gov

252-559-2503(O)
252-624-1047(C)
651 Collier Loftin Road
Kinston N.C., 28504
www.masterbrand.com

From: Scotty Kelly <SKelly@masterbrand.com>
Sent: Thursday, June 27, 2024 11:59 AM
To: Xiao, Chengqing <chengqing.xiao@deq.nc.gov>
Subject: [External] Kinston MasterBrand Air Permit Forms

In response to your request for additional forms for the two dust collectors that were installed to replace the two existing dust collectors. The following forms have been filled out and attached in this email:

- Forms B and B4 – No changes have been made to the woodworking operations whose emissions are controlled by the dust collectors.
- Form C1 - Control Device (Fabric Filter) for each of the new Torit 376-FRW-10 dust collectors (ID Nos. BH-4 and BH-5).
- Form D1 - Facility-Wide Emissions Summary
- Form D4 - Exempt and insignificant activities. This form addresses the installation and operation of a 30-gallon parts washer in the maintenance shop.
- Form D5 - Technical Analysis to Support Permit Application.
- Torit 376-FRW-10 dust collector schematics, literature, and control efficiency documentation.

In addition, I will be mailing copies of these forms as well.

Thanks,

Scotty Kelly
Sr. EHS Specialist

From: Scotty Kelly
To: Xiao, Chengqing
Cc: Amigo, Maria; Alex Tomash
Subject: RE: [External] RE: MasterBrand Cabinets, Inc. - Kinston Plant #9 - Air Permit No. 08804T13
Date: Wednesday, April 24, 2024 2:33:57 PM
Attachments: image001.png
image002.png
image003.png

Chengqing,

I just wanted to update you on this. We are currently working on getting these documents filled out and should have them to you in the next few weeks.

Thanks,

Scotty Kelly
Sr. EHS Specialist

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252-624-1047(C)
651 Collier Loftin Road
Kinston N.C., 28504
www.masterbrand.com

From: Xiao, Chengqing <chengqing.xiao@deq.nc.gov>
Sent: Tuesday, April 16, 2024 11:10 AM
To: Scotty Kelly <SKelly@masterbrand.com>
Cc: Amigo, Maria <maria.amigo@wsp.com>; Alex Tomash <ATomash@masterbrand.com>
Subject: RE: [External] RE: MasterBrand Cabinets, Inc. - Kinston Plant #9 - Air Permit No. 08804T13

Good morning Mr. Kelly,

I just noticed that I did not include the forms D1 and D2A in the email I sent yesterday 04/15/2024. These two forms were among the required form list requested by David Hughes in his 12/21/2023 email.

- Form D1 - Facility-Wide Emissions Summary after modification
- Form D2A - Air Pollutant "Project Only" Netting Worksheet

Please fill out the attached D1 & D2A forms and submit them along with the other forms listed in my 04/15/2024 email below.

Thanks,

Chengqing

Chengqing Xiao (he/his)
Environmental Engineer, Division of Air Quality
North Carolina Department of Environmental Quality
Office: (919) 707-8476
Chengqing.xiao@deq.nc.gov

From: Amigo, Maria <maria.amigo@wsp.com>
Sent: Monday, April 15, 2024 6:07 PM
To: Xiao, Chengqing <chengqing.xiao@deq.nc.gov>
Subject: RE: [External] RE: MasterBrand Cabinets, Inc. - Kinston Plant #9 - Air Permit No. 08804T13

I am out of the office this week but will review what they want next week when I am back in the office.

Maria

[wsp.com]

Maria Amigó
Senior Chemical Engineer

T+ 1 919-946-9722

WSP USA
4021 Stirrup Creek Drive, Suite 100
Durham, NC 27703
USA

wsp.com [wsp.com]

From: Xiao, Chengqing <chengqing.xiao@deq.nc.gov>
Sent: Monday, April 15, 2024 4:24 PM
To: Scotty Kelly <SKelly@masterbrand.com>
Cc: Amigo, Maria <maria.amigo@wsp.com>; Alex Tomash <ATomash@masterbrand.com>
Subject: RE: [External] RE: MasterBrand Cabinets, Inc. - Kinston Plant #9 - Air Permit No. 08804T13

Good afternoon Mr. Kelly,

This is Chengqing Xiao from Division of Air Quality (DAQ). I just joined the DAQ Title V permitting group in Raleigh Central Office (RCO). Mr. David Hughes got a promotion and moved to DAQ's Technical Services Section and the Title V permit renewal application for MasterBrand Cabinets, Inc. - Kinston Plant #9 has been reassigned to me.

David and you had email correspondence below requesting the facility to submit some applicable application forms, which were not included in this Title V permit renewal application received on June 3, 2022. The following forms are required for the permit renewal application, and we haven't received them.

- Form B and B4 – including emissions rates after the two new Torit 376-RFW-10 Dust Collectors (ID Nos. BH-4 and BH-5, respectively) have been installed.
- Form D4 for the newly added Parts washer (ID No. IES11) listed on the Exempt and Insignificant Activities.
- Form D5 with a professional engineer's signature and seal.
- Form C1 for each of the new Torit 376-FRW-10 Dust Collectors (ID Nos. BH-4 and BH-5).

Attached forms are downloaded from DAQ web site. Please fill out these required forms and email them back to me as early as you can, and feel free to contact me if you have any questions.
Thank you for your time in helping with this.
Chengqing
Chengqing Xiao (he/his)
Environmental Engineer, Division of Air Quality
North Carolina Department of Environmental Quality
Office: (919) 707-8476
Chengqing.xiao@deq.nc.gov

From: Hughes, David
Sent: Friday, January 26, 2024 12:16 PM
To: Scotty Kelly <SKelly@masterbrand.com>; Amigó, Maria <maria.amigo@wsp.com>; Alex Tomash <ATomash@masterbrand.com>
Subject: RE: [External] RE: MasterBrand Cabinets, Inc. - Kinston Plant #9 - Air Permit No. 08804T13

Scotty,

These forms can be found online. Here are the steps to access forms.

1. www.deq.nc.gov [deq.nc.gov]
2. Division of Air Quality
3. Permitting
4. Modifying or Applying for an Air Quality Permit
5. Permit Application Forms (xlsx or pdf)

Let me know if there are any issues accessing these forms.

Thanks
David

From: Scotty Kelly <SKelly@masterbrand.com>
Sent: Friday, January 26, 2024 11:06 AM
To: Amigó, Maria <maria.amigo@wsp.com>; Alex Tomash <ATomash@masterbrand.com>
Cc: Hughes, David <david.b.hughes@deq.nc.gov>
Subject: [External] RE: MasterBrand Cabinets, Inc. - Kinston Plant #9 - Air Permit No. 08804T13

David,

Can you send over the required forms that you need filled out?

Thanks,

Scotty Kelly
Sr. EHS Specialist

252-559-2503(O)
252-624-1047(C)
651 Collier Loftin Road
Kinston N.C., 28504
www.masterbrand.com

MASTERBRAND

From: Amigó, Maria <maria.amigo@wsp.com>
Sent: Friday, January 26, 2024 11:03 AM
To: Scotty Kelly <SKelly@masterbrand.com>; Alex Tomash <ATomash@masterbrand.com>
Cc: Hughes, David <david.b.hughes@deq.nc.gov>
Subject: RE: MasterBrand Cabinets, Inc. - Kinston Plant #9 - Air Permit No. 08804T13

So is he sending the documents?

We are taking the ZZZZ report out of the semi-annual report and telling the agency it will be sent under separate cover. **The ZZZZ report is still due by 30 January.** I have reviewed your semi-annual report and Kyle is addressing my comments. The Semi- annual report without the ZZZZ should be to you in a few hours.

Maria

[wsp.com]

Maria Amigó
Senior Chemical Engineer

T+ 1 919-946-9722

WSP USA
4021 Stirrup Creek Drive, Suite 100
Durham, NC 27703
USA

wsp.com [wsp.com]

From: Scotty Kelly <SKelly@masterbrand.com>
Sent: Friday, January 26, 2024 9:17 AM
To: Amigó, Maria <maria.amigo@wsp.com>; Alex Tomash <ATomash@masterbrand.com>
Cc: Hughes, David <david.b.hughes@deq.nc.gov>
Subject: RE: MasterBrand Cabinets, Inc. - Kinston Plant #9 - Air Permit No. 08804T13

Maria,

See below email in regard to documents needed for our air permit. I just spoke with Mr. David Hughes, and he stated that the documents can be sent to his email directly.

He is copied on this email as well.

Thanks,

Scotty Kelly
Sr. EHS Specialist

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252-624-1047(C)
651 Collier Loftin Road
Kinston N.C., 28504
www.masterbrand.com

MASTERBRAND

From: Hughes, David <david.b.hughes@deq.nc.gov>
Sent: Thursday, December 21, 2023 4:53 PM
To: Scotty Kelly <SKelly@masterbrand.com>
Subject: MasterBrand Cabinets, Inc. - Kinston Plant #9 - Air Permit No. 08804T13

Hey Scotty,

Good afternoon,

I sent you a few emails on September 28 and October 5 and 26, 2023 asking for forms B, B4, D1, D2A, and D5 to be filled out. Can you please get those to me at the beginning of next year? I need them to complete my technical review of your permit renewal. Once I complete the technical review, I will send them to the appropriate people for review. After comments are received and addressed, I will send it to public notice and EPA review.

I'm off the rest of this week and next week. If you could get me those forms in January, I would appreciate it.

Have a Merry Christmas and a Happy New Year.

Thanks
David

---

parties by an authorized state official.

-LAEmHhHzdJzBlTWfa4Hgs7pbKl

5400187.22A Attachment 2

Bagfilter Evaluation - BH-4 (BH-5) MasterBrand Cabinets LLC - Kinston Plant #9 (5400187)

User Input

User must supply information in blue (double outline).

Optional user information is single outlined.

Particulate Material: Wood	Estimated Efficiency (%): 99.9
Actual Air Flow Rate (acfm): 40,091	Cloth Area (sq ft): 4,891
Maximum Operating Temperature (F): 100	Proposed Cloth Material: Wool
	Pulse Jet?: yes
Uncontrolled Particulate Rate (lb/hr): 125.0	Process Rate (lb/hr):
Maximum Pressure Drop (in H2O): 6	No. of compartments: 376
Gas Stream Moisture (%):	Felted?: yes
Time Between Cleanings (min):	Cleaning Time (min): ?

Particle Size Distribution

Avg. Size (um)	Size Ranges (um)	Size (um)	Cumul. Mass (% < size)
1.25	0 - 2.5	0	5.8
3.75	2.5 - 5	2.5	16.5
7.5	5 - 10	5	40.3
12.5	10 - 15	10	51.6
17.5	15 - 20	15	57.0
20	> 20	20	100.0

Information Source(s)

Program Output

Filtering Velocity Analysis

Typical Filtering Velocity (fpm)	Applicant Filtering Velocity (fpm)
12.0	8.2

Typical filtering velocity not exceeded.

Fabric Durability Analysis

	Chemical Resistance: Acid	Alkali	Organics
Fabric appropriate for max. oper. temp.	Good	Poor	Good

Particulate Emissions Analysis

Controlled Particulate Rate (lb/hr): 0.196

Gas Stream Particulate Loadings (gr/dscf)

Uncontrolled	0.35
Controlled	0.0005

Note: Correct gas stream temperature and moisture content must be entered!

The estimated collection efficiency may be unreasonable.
See bagfilter efficiency calculation below!

Allowable Emissions per 2D .0515 (lb/hr): 0.00

Maximum Areal Dust Loading (gr/sq ft)	Dust drag (K2) parameter ((inH2O/fpm)/(lb/sq ft))
0.0	0

Efficiency Calculations

Mass in Range (%)	Control Efficiency (%)	eta-m (%)
5.8	98.00	5.68
10.7	99.90	10.69
23.8	99.90	23.78
11.3	99.99	11.30
5.4	99.99	5.40
43.0	99.99	43.00
	Overall Control Efficiency =	99.84 %
	Penetration =	0.16 %

Bagfilter evaluation developed by:

William D. Willets, M.S., E.I.T.
North Carolina Division of Environmental Management
Air Quality Permitting

Version 3.3; September 23, 1999

Bagfilter Evaluation - BH-3 MasterBrand Cabinets LLC - Kinston Plant #9 (5400187)

User Input

User must supply information in blue (double outline).

Optional user information is single outlined.

Particulate Material: Wood	Estimated Efficiency (%): 99.9
Actual Air Flow Rate (acfm): 70,000	Cloth Area (sq ft): 7,502
Maximum Operating Temperature (F): 100	Proposed Cloth Material: Wool
	Pulse Jet?: yes
Uncontrolled Particulate Rate (lb/hr): 125.0	Process Rate (lb/hr):
Maximum Pressure Drop (in H2O): 8	No. of compartments: 484
Gas Stream Moisture (%):	Felted?: yes
Time Between Cleanings (min):	Cleaning Time (min): ?

Particle Size Distribution

Avg. Size (um)	Size Ranges (um)	Size (um)	Cumul. Mass (% < size)
1.25	0 - 2.5	0	5.8
3.75	2.5 - 5	2.5	16.5
7.5	5 - 10	5	40.3
12.5	10 - 15	10	51.6
17.5	15 - 20	15	57.0
20	> 20	20	100.0

Information Source(s)

Program Output

Filtering Velocity Analysis

Typical Filtering Velocity (fpm)	Applicant Filtering Velocity (fpm)
12.0	9.3

Typical filtering velocity not exceeded.

Fabric Durability Analysis

	Chemical Resistance			
	Acid	Alkali	Organics	
Fabric appropriate for max. oper. temp.	Good	Poor	Good	

Particulate Emissions Analysis

Controlled Particulate Rate (lb/hr): 0.196

Gas Stream Particulate Loadings (gr/dscf)

Uncontrolled	0.20
Controlled	0.0003

Note: Correct gas stream temperature and moisture content must be entered!

The estimated collection efficiency may be unreasonable.
See bagfilter efficiency calculation below!

Allowable Emissions per 2D .0515 (lb/hr): 0.00

Maximum Areal Dust Loading (gr/sq ft)	Dust drag (K2) parameter ((inH2O/fpm)/(lb/sq ft))
0.0	0

Efficiency Calculations

Mass in Range (%)	Control Efficiency (%)	eta-m (%)
5.8	98.00	5.68
10.7	99.90	10.69
23.8	99.90	23.78
11.3	99.99	11.30
5.4	99.99	5.40
43.0	99.99	43.00
	Overall Control Efficiency =	99.84 %
	Penetration =	0.16 %

Bagfilter evaluation developed by:
William D. Willets, M.S., E.I.T.
North Carolina Division of Environmental Management
Air Quality Permitting
Version 3.3; September 23, 1999

Safety Data Sheet

1. Identification

Product Information: M745-2012

Product Name: INSTANT ADHESIVE ACTIVATOR AEROSOL

Recommended Use: Surface Preparation or Protection

Supplied by:
Mohawk Finishing Products
Division of RPM Industrial Coatings Group
2220 US Hwy 70 SE Suite 100
Hickory, NC 28602
USA

Company Phone No: (800) 522-8266

Emergency Phone No. CHEMTREC: (800) 424-9300

International Emergency No. CHEMTREC: (703) 527-3887 (Collect calls are accepted)

2. Hazards Identification

GHS Classification
Asp. Tox. 1, Carc. 1B, Comp. Gas, Fl Aer, 1, Muta. 1B, STOT RE 2

Symbol(s) of Product

Signal Word
Danger

Possible Hazards
26% of the mixture consists of ingredients of unknown acute toxicity

GHS HAZARD STATEMENTS

Flammable Aerosol, category 1	H222	Extremely flammable aerosol.
Germ Cell Mutagenicity, category 1B	H340	May cause genetic defects.
Carcinogenicity, category 1B	H350	May cause cancer.
STOT, repeated exposure, category 2	H373	May cause damage to organs through prolonged or repeated exposure.
Aspiration Hazard, category 1	H304	May be fatal if swallowed and enters airways.
Compressed Gas	H280	Contains gas under pressure; may explode if heated.

GHS SDS PRECAUTIONARY STATEMENTS

P210	Keep away from heat. - No smoking.
P211	Do not spray on an open flame or other ignition source.
P251	Pressurized container: Do not pierce or burn, even after use.
P280	Wear eye protection/ face protection.
P314	Get medical advice/attention if you feel unwell.
P331	Do NOT induce vomiting.
P405	Store locked up.

P410+P403	Protect from sunlight. Store in a well-ventilated place.
P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
P201	Obtain special instructions before use.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

3. Composition/Information on ingredients

Chemical Name	CAS-No.	Wt. %	GHS Symbols	GHS Statements
petroleum distillate	64742-49-0	55-75	GHS08	H304-340-350
propane	74-98-6	10-25	GHS02-GHS04	H220-280
n-butane	106-97-8	2.5-10	GHS02-GHS04	H220-280
Benzenamine, N,N,4-trimethyl-	99-97-8	2.5-10	GHS06-GHS08	H302-330-350-373

The exact percentage (concentration) of ingredients is being withheld as a trade secret.

The text for GHS Hazard Statements shown above (if any) is given in the "Other information" Section.

4. First-aid Measures

FIRST AID - EYE CONTACT: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

FIRST AID - SKIN CONTACT: IF ON SKIN: Gently wash with plenty of soap and water. If skin irritation occurs: Get medical advice/ attention.

FIRST AID - INGESTION: Do NOT induce vomiting. IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

FIRST AID - INHALATION: IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician.

5. Fire-fighting Measures

SPECIAL FIREFIGHTING PROCEDURES: Evacuate all persons from the fire area to a safe location. Move non-burning material, as feasible, to a safe location as soon as possible. Fire fighters should be protected from potential explosion hazards while extinguishing the fire. Wear self-contained breathing apparatus (SCBA) and full fire-fighting protective clothing. Thoroughly decontaminate all protective equipment after use. Containers of this material may build up pressure if exposed to heat (fire). Use water spray to cool fire-exposed containers. Use water spray to disperse vapors if a spill or leak has not ignited. DO NOT extinguish a fire resulting from the flow of flammable liquid until the flow of the liquid is effectively shut off. This precaution will help prevent the accumulation of an explosive vapor-air mixture after the initial fire is extinguished.

FIREFIGHTING EQUIPMENT: This is a NFPA/OSHA Category 1 flammable aerosol. Follow NFPA 30B, Chapter 4 for fire protection and fire suppression. Use a dry chemical, carbon dioxide, or similar ABC fire extinguisher for incipient fires. Water may be used to cool and prevent rupture of containers that are exposed to heat from fire

6. Accidental Release Measures

ENVIRONMENTAL MEASURES: No Information

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Follow personal protective equipment recommendations found in Section VIII. Personal protective equipment needs must be evaluated based on information provided on this sheet and the special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred, and the training and the expertise of employees in the area responding to the spill. Never exceed any occupational exposure limits. Shut off ignition sources; including electrical equipment and flames. Do not allow smoking in the area. Do not allow the spilled product to enter public drainage system or open waterways.

7. Handling and Storage

HANDLING: Avoid inhalation and contact with eyes, skin, and clothing. Wash hands thoroughly after handling and before eating or drinking. In keeping with safe handling practices, avoid ignition sources (smoking, flames, pilot lights, electrical sparks); ground and bond containers when transferring the material to prevent static electricity sparks that could ignite vapor and use spark proof tools and explosion proof equipment. Empty containers may retain product residue or vapor. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose container to heat, flame, sparks, static electricity, or other sources of ignition. Any of these actions can potentially cause an explosion that may lead to injury.

STORAGE: Keep containers closed when not in use. Store in cool well ventilated space away from incompatible materials.

8. Exposure Controls/Personal Protection

Ingredients with Occupational Exposure Limits

Chemical Name	ACGIH TLV-TWA	ACGIH-TLV STEL	OSHA PEL-TWA	OSHA PEL-CEILING
petroleum distillate	100 ppm	N.D.	N.D.	N.D.
propane	N.D.	N.D.	1000 ppm	N.D.
n-butane	N.D.	1000 ppm	N.D.	N.D.
Benzenamine, N,N,4-trimethyl-	N.D.	N.D.	N.D.	N.D.

Further Advice: MEL = Maximum Exposure Limit OES = Occupational Exposure Standard SUP = Supplier's Recommendation Sk = Skin Sensitizer N.E. = Not Established N.D. = Not Determined

Personal Protection

RESPIRATORY PROTECTION: Use adequate engineering controls and ventilation to keep levels below recommended or statutory exposure limits. If exposure levels exceed limits use appropriate approved respiratory protection equipment.

SKIN PROTECTION: Wear chemical resistant footwear and clothing such as gloves, an apron or a whole body suit as appropriate.

EYE PROTECTION: Wear chemical-resistant glasses and/or goggles and a face shield when eye and face contact is possible due to splashing or spraying of material.

OTHER PROTECTIVE EQUIPMENT: No Information

HYGIENIC PRACTICES: It is good practice to avoid contact with the product and/or its vapors, mists or dust by using appropriate protective measures. Wash thoroughly after handling and before eating or drinking.

9. Physical and Chemical Properties

Appearance:	Clear Liquid	**Physical State:**	Aerosol
Odor:	Strong Solvent	**Odor Threshold:**	Not Determined
Density, g/cm3:	0.638	**pH:**	Not Determined
Freeze Point, °F:	Not Determined	**Viscosity:**	Not Determined
Solubility in Water:	Not Determined	**Partition Coefficient, n-octanol/ water:**	Not Determined
Decomposition temperature, °F:	Not Determined	**Explosive Limits, %:**	Not Determined
Boiling Range, °F:	Not Determined	**Flash Point, °F:**	-76 ° F
Combustibility:	Supports Combustion	**Auto-Ignition Temperature, °F:**	Not Determined
Evaporation Rate:	Faster than Diethyl Ether	**Vapor Pressure, mmHg:**	Not Determined
Vapor Density:	Not Determined		

N.I. = No Information

10. Stability and reactivity

STABILITY: Stable under normal conditions.

CONDITIONS TO AVOID: Heat, flames and sparks.

INCOMPATIBILITY: Acids, Bases, Oxidizing agents

HAZARDOUS DECOMPOSITION PRODUCTS: Not determined.

11. Toxicological information

Practical Experiences

EMERGENCY OVERVIEW: No Information

EFFECT OF OVEREXPOSURE - EYE CONTACT: No Information

EFFECT OF OVEREXPOSURE - INGESTION: No Information

EFFECT OF OVEREXPOSURE - INHALATION: No Information

EFFECT OF OVEREXPOSURE - SKIN CONTACT: No Information

CARCINOGENICITY: May cause cancer.

PRIMARY ROUTE(S) OF ENTRY:

Ingestion

Acute Toxicity Values
The acute effects of this product have not been tested. Data on individual components are tabulated below

CAS-No.	Chemical Name	Oral LD50	Dermal LD50	Vapor LC50
64742-49-0	petroleum distillate	>5000 mg/kg Rat	>3160 mg/kg Rabbit	54 mg/l Rat

74-98-6	propane	N.I.	N.I.	658 mg/L Rat
99-97-8	Benzenamine, N,N,4-trimethyl-	1650 mg/kg Rat	>2000 mg/kg Rabbit	1.4 mg/L Rat

N.I. = No Information

12. Ecological information

ECOLOGICAL INFORMATION: Ecological evaluation of this material has not been performed; however, do not allow the product to be released to the environment without governmental approval/permits.

13. Disposal Information

Product

DISPOSAL METHOD: Waste from this material may be a listed and/or characteristic hazardous waste. Dispose of material, contaminated absorbent, container and unused contents in accordance with local, state, and federal regulations.

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Follow personal protective equipment recommendations found in Section VIII. Personal protective equipment needs must be evaluated based on information provided on this sheet and the special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred, and the training and the expertise of employees in the area responding to the spill. Never exceed any occupational exposure limits. Shut off ignition sources; including electrical equipment and flames. Do not allow smoking in the area. Do not allow the spilled product to enter public drainage system or open waterways.

14. Transport Information

SPECIAL TRANSPORT PRECAUTIONS: No Information

DOT:	LIMITED QUANTITY
IATA:	ID8000, CONSUMER COMMODITY, 9
IMDG:	LIMITED QUANTITY UN1950

15. Regulatory Information

U.S. Federal Regulations:

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Fire Hazard, Chronic Health Hazard, Acute Health Hazard

SARA SECTION 313

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

No Sara 313 components exist in this product.

TOXIC SUBSTANCES CONTROL ACT

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

No TSCA components exist in this product.

U.S. State Regulations:

CALIFORNIA PROPOSITION 65

⚠ WARNING: Cancer - www.P65Warnings.ca.gov.

4-Dimethylaminotoluidine, Cancer, 3.6985%

16. Other Information

Revision Date: 7/27/2024 **Supersedes Date:** 6/14/2023

Reason for revision: Product Composition Changed
Substance and/or Product Properties Changed in Section(s):
01 - Product Information
02 - Hazards Identification
03 - Composition/Information on Ingredients
08 - Exposure Controls/Personal Protection
09 - Physical & Chemical Information
11 - Toxicological Information
Revision Statement(s) Changed

Datasheet produced by: Regulatory Department

HMIS Ratings:

Health:	2	**Flammability:**	4	**Reactivity:**	0	**Personal Protection:**	X

Volatile Organic Compounds, gr/ltr: 638

Text for GHS Hazard Statements shown in Section 3 describing each ingredient:

H220	Extremely flammable gas.
H280	Contains gas under pressure; may explode if heated.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H330	Fatal if inhaled.
H340	May cause genetic defects.
H350	May cause cancer.
H373	May cause damage to organs through prolonged or repeated exposure.

Icons for GHS Pictograms shown in Section 3 describing each ingredient:

GHS02

GHS04

GHS06

GHS08

The information on this sheet corresponds to our present knowledge. It is not a specification and it does not guarantee specific properties. The information is intended to provide general guidance as to health and safety based upon our knowledge of the handling, storage, and use of the product. It is not applicable to unusual or non-standard uses of the product where instructions and recommendations are not followed.

Only the original U.S. - English version is authoritative.

M745-1260 Medium/Thin Viscosity Surface Insensitive Cyanoacrylate Adhesive

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Issue date: 7/23/2017 Revision date: 4/12/2024 Supersedes: 8/24/2017 Version: 3.0

SECTION 1: Identification

1.1. Identification

Product form	:	Mixture
Name	:	M745-1260 Medium/Thin Viscosity Surface Insensitive Cyanoacrylate Adhesive
Product code	:	**M745-1260 (2 Oz)**
Other means of identification	:	Mohawk Cyanoacrylate Adhesive

1.2. Recommended use and restrictions on use

Use of the substance/mixture	:	Cyanoacrylate Adhesive
Recommended use	:	Adhesives, sealants

1.3. Supplier

Supplier
RPM Industrial Coatings Group
3194 B Hickory Blvd.
Hudson, NC 28638
Phone: 828-728-8266
Fax: 828-728-2409

1.4. Emergency telephone number

Emergency number	:	CHEMTREC (800) 424-9300 CHEMTREC® International Emergency number: 703-527-3887

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Flammable liquids Category 4	H227	Combustible liquid
Skin corrosion/irritation Category 2	H315	Causes skin irritation
Serious eye damage/eye irritation Category 2A	H319	Causes serious eye irritation
Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation	H335	May cause respiratory irritation

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US) :

Signal word (GHS US) : Warning

Hazard statements (GHS US) : H227 - Combustible liquid
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H335 - May cause respiratory irritation

Precautionary statements (GHS US) : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261 - Avoid breathing fume, vapors.
P264 - Wash hands thoroughly after handling.
P271 - Use only outdoors or in a well-ventilated area.
P280 - Wear eye protection, protective gloves.
P302+P352 - If on skin: Wash with plenty of soap and water.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 - If eye irritation persists: Get medical advice/attention.
P362 - Take off contaminated clothing and wash before reuse.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards which do not result in classification

Other hazards which do not result in classification : Cyanoacrylate. Danger. Bonds skin and eyes in seconds. Keep out of the reach of children. Contact with skin through cellulose based fabrics (i.e cotton, rayon, linen, viscose) generates heat and may cause burns. The product does not meet the PBT and vPvB classification criteria.

2.4. Unknown acute toxicity (GHS US)

No additional information available

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS US classification
ethyl-2-cyanoacrylate	CAS-No.: 7085-85-0	≥ 90	Flam. Liq. 4, H227 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general : If you feel unwell, seek medical advice (show the label where possible). Never give anything by mouth to an unconscious person.

First-aid measures after inhalation : If inhaled, remove to fresh air and keep at rest in a position comfortable for breathing. If symptoms persist, consult a doctor.

First-aid measures after skin contact : Cyanoacrylates bond skin in seconds. Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. Do not remove clothing if it sticks to the skin. Do not pull solidified product away from the skin. Any bonded skin should be gently peeled apart, preferably after soaking in warm, soapy water. In the case of large spills on the skin, superficial burns may occur - treat accordingly. If irritation persists, consult a doctor.

First-aid measures after eye contact	:	Cyanoacrylates bond eyelids in seconds. Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If the eyelid is bonded closed, do not force open. Cover with a gauze pad soaked in warm water. Get prompt medical attention in the case of solid particles of cured cyanoacrylate getting trapped behind the eye, there is a possibility of causing abrasive damage. The affected eye should be covered with wet dressing until the separation process is complete, usually 1-3 days.
First-aid measures after ingestion	:	The product will polymerize immediately in the mouth, making it almost impossible to swallow, but beware of possible choking hazard. Make sure the airways are not obstructed. Saliva will separate the solidified product from the mouth within a few hours. If symptoms persist, consult a doctor.

4.2. Most important symptoms and effects (acute and delayed)

Potential Adverse human health effects and symptoms	:	Cyanoacrylates bond skin and eyelids in seconds. Keep out of the reach of children. Causes skin and eye irritation. May cause respiratory irritation. Certain reactions were observed for sensitive people.
Expected Symptoms/Effects, Acute and Delayed	:	Bonds skin and eyes in seconds.
Symptoms/effects	:	Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation.
Symptoms/effects after inhalation	:	May cause respiratory irritation. May cause shortness of breath, tightness of the chest, a sore throat and cough.
Symptoms/effects after skin contact	:	Cyanoacrylates bond skin in seconds. May cause irritation to skin. Redness.
Symptoms/effects after eye contact	:	Causes serious eye irritation. redness, itching, tears.
Symptoms/effects after ingestion	:	Ingestion unlikely. The product will polymerize immediately in the mouth, making it almost impossible to swallow, but beware of possible choking hazard. May cause a light irritation of the linings of the mouth, throat, and gastrointestinal tract.
Most Important Symptoms/Effects	:	Bonds skin and eyes in seconds.

4.3. Immediate medical attention and special treatment, if necessary

An eyewash station should be available on the premises, near to any point of possible exposure. . Do not pull bonded skin apart.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	:	dry chemical powder, alcohol-resistant foam, carbon dioxide (CO_2).
Unsuitable extinguishing media	:	Polymerizes on exposure to water (moisture). High volume water jet or water based extinguishing media.

5.2. Specific hazards arising from the chemical

Fire hazard	:	Combustible liquid.
Explosion hazard	:	Prolonged exposure to fire may cause containers to rupture/explode.
Reactivity in case of fire	:	Polymerizes on exposure to temperature rise: pressure build-up may cause closed container to burst. Polymerizes on exposure to water (moisture). Do not allow water to enter the vessels, a violent reaction may occur.
Hazardous decomposition products in case of fire	:	Combustion products may include the following: carbon oxides (CO, CO2) (carbon monoxide, carbon dioxide) nitrogen oxides (NO, NO_2 etc.).

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions	:	Exercise caution when fighting any chemical fire. IF exposed to fire cool the closed containersby spraying with water. Do not allow water to enter the vessels, a violent reaction may occur.
Protection during firefighting	:	Do not enter fire area without proper protective equipment, including respiratory protection. Complete protective clothing.
Other information	:	Do not allow run-off from fire fighting to enter drains or water courses.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Eliminate every possible source of ignition. Ensure adequate ventilation. Avoid all contact with skin, eyes, or clothing.

6.1.1. For non-emergency personnel

Protective equipment : Use appropriate personal protection equipment (PPE).

Emergency procedures : Avoid breathing vapors.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. Protective gloves. (ANSI 105-2016/ EN 374-2 or equivalent). Safety glasses. (ANSI z87.1/ ISO 16321-1 or equivalent).

Emergency procedures : Evacuate unnecessary personnel. Mark out the contaminated area with signs and prevent access to unauthorized personnel. Ventilate area. No flames, no sparks. Eliminate all sources of ignition. Use appropriate personal protection equipment (PPE). Do not touch or walk on the spilled product. Contain the spilled material by bunding.

6.2. Environmental precautions

Do not allow water (or moist air) contact with this material. Avoid release to the environment. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Contain the spilled material by bunding. Cover spill with non combustible material, e.g.: sand, earth, vermiculite.

Methods for cleaning up : Take up small spills with dry chemical absorbent. (Do not use cloths; rags or other materials made from cellulose fibres). Or polymerize slowly with water (~10:1, adhesive : water) and then scrape up residue. Use non-sparking tools.

Other information : Place spent adsorbent in sealed packages and contact specialist waste disposal contractor. Dispose of materials or solid residues at an authorized site. For disposal of contaminated materials refer to section 13 : "Disposal considerations".

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection. For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Cyanoacrylates bond skin and eyelids in seconds. Keep out of the reach of children.

Precautions for safe handling : Presents no particular risk when handled in accordance with good occupational hygiene practice. Avoid contact of substance with water. Do not get in eyes, on skin, or on clothing. Keep away from sources of ignition - No smoking. Use only outdoors or in a well-ventilated area. Ambient humidity should be >35% to minimise discomfort. . Use personal protective equipment as required. Do not wear cellulose based protective clothing (i.e cotton, rayon, linen, viscose).

Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Do not eat, drink or smoke in areas where product is used.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Comply with applicable regulations. Store in accordance with local, regional, national or international regulation.

Storage conditions	:	Keep only in the original container in a cool, well ventilated place away from : Direct sunlight, Heat sources, Sources of ignition, Water, humidity. Store in a dry place. Store at temperatures not exceeding 24°C / 75°F. Keep container closed when not in use.
Incompatible products	:	Amines. alcohols. Oxidizing agents. Water. Strong bases. Strong acids.
Incompatible materials	:	Sources of ignition. High temperature. Direct sunlight. Water, humidity.
Storage temperature	:	2 – 24 °C
Storage area	:	For optimum shelf-life, it is recommended to keep the product in a refrigerated storage area.
Packaging materials	:	Keep only in original container.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

M745-1260 Medium/Thin Viscosity Surface Insensitive Cyanoacrylate Adhesive	
USA - ACGIH - Occupational Exposure Limits	
Local name	Ethyl cyanoacrylate
ACGIH OEL TWA	0.2 ppm
ACGIH OEL STEL	1 ppm
Remark (ACGIH)	TLV® Basis: Eye & URT irr; asthma. Notations: DSEN; RSEN
Regulatory reference	ACGIH 2024

ethyl-2-cyanoacrylate (7085-85-0)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Ethyl cyanoacrylate
ACGIH OEL TWA	0.2 ppm
ACGIH OEL STEL	1 ppm
Remark (ACGIH)	TLV® Basis: Eye & URT irr; asthma. Notations: DSEN; RSEN
Regulatory reference	ACGIH 2024

8.2. Appropriate engineering controls

Appropriate engineering controls	:	Work in a well-ventilated area. Ambient humidity should be >35% to minimise discomfort. . Avoid contact with skin and eyes. An eyewash station should be available on the premises, near to any point of possible exposure. . Wear recommended personal protective equipment.
Environmental exposure controls	:	Do not discharge into drains or the environment.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Safety glasses. Gloves. Normal overalls.

Materials for protective clothing:
Do not wear cellulose based protective clothing (i.e cotton, rayon, linen, viscose). Keep suitable chemically resistant protective clothing readily available for emergency use

Hand protection:
Protective gloves. (ANSI 105-2016)

Type	Material	Permeation	Thickness (mm)	Penetration
Reusable gloves	Nitrile rubber (NBR), Fluoroelastomer (FKM), Viton® II	5 (> 240 minutes)	<0.5	

Eye protection:

Safety glasses. (ANSI z87.1)

Type	Field of application	Characteristics
Safety glasses	Droplet	With side shields

Skin and body protection:

Normal overalls. Do not wear cellulose based protective clothing (i.e cotton, rayon, linen, viscose).

Respiratory protection:

In case of inadequate ventilation wear respiratory protection. Recommended: Filter A (brown). 30 CFR 11.150 (Respiratory Protective Devices Vapour/Gas)

Personal protective equipment symbol(s):

Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Appearance	:	Clear, colorless liquid.
Color	:	Colorless
Odor	:	Acrid Sharp
Odor threshold	:	No data available
pH	:	substance/mixture reacts with water
Melting point	:	-31 °C
Freezing point	:	No data available
Boiling point	:	417 °F 100.3 kPa
Flash point	:	> 176 °F
Relative evaporation rate (butyl acetate=1)	:	Negligible
Flammability (solid, gas)	:	Combustible liquid.
Vapor pressure	:	≤ 0.5 mm Hg @20 °C / 68 °F
Relative vapor density at 20°C	:	No data available
Particle size	:	Not applicable (Liquid)
Relative density	:	1.06
Solubility	:	Soluble in acetone. Polymerizes on exposure to water (moisture). Water: 24 µg/l @ 20 °C & pH 6.6
Partition coefficient n-octanol/water (Log Pow)	:	0.776 @ 22 °C & pH 6.3
Auto-ignition temperature	:	842 °F 101.3 kPa
Decomposition temperature	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	≈ 100 cP Rotational viscometer 20rpm @ 25°C

Explosion limits	:	No data available
Explosive properties	:	Product is not explosive.
Oxidizing properties	:	Not oxidising.

9.2. Other information

VOC content	:	< 2 % California SCAQMD method 316 (Estimated)
Bulk density	:	1.06 g/cm³
Other properties	:	Polymerizes on exposure to water (moisture).

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known under normal conditions of use. Hazardous polymerization may occur if exposed to high temperature.

10.2. Chemical stability

Combustible liquid. Polymerizes on exposure to water (moisture).

Hardening time: : < 50 Seconds.

10.3. Possibility of hazardous reactions

Stable under normal conditions of use. Polymerizes on exposure to temperature rise: pressure build-up may cause closed container to burst.

10.4. Conditions to avoid

Sources of ignition. High temperature. Direct sunlight. Water, humidity.

10.5. Incompatible materials

Amines. alcohols. Oxidizing agents. Water. Strong bases. Strong acids.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. Combustion products may include the following: carbon oxides (CO, CO2) (carbon monoxide, carbon dioxide) nitrogen oxides (NO, NO_2 etc.).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	:	Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (dermal)	:	Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation)	:	Not classified (Based on available data, the classification criteria are not met)

ethyl-2-cyanoacrylate (7085-85-0)	
LD50 oral rat	> 5000 mg/kg body weight Animal: rat, Animal sex: male (OECD 423 method)
LD50 dermal rabbit	> 2000 mg/kg body weight OECD 402: Acute Dermal Toxicity, 24 h, Rabbit, Experimental value, Skin, 14 day(s)

Polymethyl Methacrylate (9011-14-7)	
LD50 oral rat	> 5000 mg/kg LD 50 oral (rat) :

Skin corrosion/irritation : Causes skin irritation.
pH: substance/mixture reacts with water

ethyl-2-cyanoacrylate (7085-85-0)	
pH	substance/mixture reacts with water

Serious eye damage/irritation : Causes serious eye irritation.
pH: substance/mixture reacts with water

ethyl-2-cyanoacrylate (7085-85-0)	
pH	substance/mixture reacts with water

Respiratory or skin sensitization : Not classified (Based on available data, the classification criteria are not met)

Germ cell mutagenicity : Not classified (Based on available data, the classification criteria are not met)

Carcinogenicity : Not classified (Based on available data, the classification criteria are not met)

Polymethyl Methacrylate (9011-14-7)	
IARC group	3 - Not classifiable

Reproductive toxicity : Not classified (Based on available data, the classification criteria are not met)

STOT-single exposure : May cause respiratory irritation.

ethyl-2-cyanoacrylate (7085-85-0)	
STOT-single exposure	May cause respiratory irritation.

STOT-repeated exposure : Not classified (Based on available data, the classification criteria are not met)

Aspiration hazard : Not classified (Based on available data, the classification criteria are not met)

Viscosity, kinematic : No data available

ethyl-2-cyanoacrylate (7085-85-0)	
Viscosity, kinematic	2.493 mm^2/s

Potential Adverse human health effects and symptoms : Cyanoacrylates bond skin and eyelids in seconds. Keep out of the reach of children. Causes skin and eye irritation. May cause respiratory irritation. Certain reactions were observed for sensitive people.

Expected Symptoms/Effects, Acute and Delayed : Bonds skin and eyes in seconds.

Symptoms/effects : Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation.

Symptoms/effects after inhalation : May cause respiratory irritation. May cause shortness of breath, tightness of the chest, a sore throat and cough.

Symptoms/effects after skin contact : Cyanoacrylates bond skin in seconds. May cause irritation to skin. Redness.

Symptoms/effects after eye contact : Causes serious eye irritation. redness, itching, tears.

Symptoms/effects after ingestion : Ingestion unlikely. The product will polymerize immediately in the mouth, making it almost impossible to swallow, but beware of possible choking hazard. May cause a light irritation of the linings of the mouth, throat, and gastrointestinal tract.

Most Important Symptoms/Effects : Bonds skin and eyes in seconds.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

Ecology - water : Polymerizes on exposure to water (moisture)

12.2. Persistence and degradability

M745-1260 Medium/Thin Viscosity Surface Insensitive Cyanoacrylate Adhesive	
Persistence and degradability	Biodegradability in water: no data available.

ethyl-2-cyanoacrylate (7085-85-0)	
Persistence and degradability	Readily biodegradable in water.

Polymethyl Methacrylate (9011-14-7)	
Persistence and degradability	Biodegradability in water: no data available.

12.3. Bioaccumulative potential

M745-1260 Medium/Thin Viscosity Surface Insensitive Cyanoacrylate Adhesive	
Partition coefficient n-octanol/water (Log Pow)	0.776 @ 22 °C & pH 6.3
Bioaccumulative potential	No bioaccumulation potential.

ethyl-2-cyanoacrylate (7085-85-0)	
Partition coefficient n-octanol/water (Log Pow)	0.776 (Published data)
Bioaccumulative potential	Low bioaccumulation potential. (Log Kow < 4).

Polymethyl Methacrylate (9011-14-7)	
Bioaccumulative potential	No bioaccumulation data available.

12.4. Mobility in soil

M745-1260 Medium/Thin Viscosity Surface Insensitive Cyanoacrylate Adhesive	
Ecology - soil	Potential for mobility in soil is slight.
Additional information	Mobility is considered to be very low due to rapid polymerization with water.

ethyl-2-cyanoacrylate (7085-85-0)	
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	0.834 (calculated value)
Ecology - soil	Highly mobile in soil.

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Disposal methods

Regional waste regulation : Disposal must be done according to official regulations.

Waste treatment methods : Disposal to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal. The product can be polymerized slowly with water (ratio of 10:1, adhesive : water). Cured product can then be disposed of in land-fill sites by licensed contractors.

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

Additional information : Empty containers should be taken for recycling, recovery or waste in accordance with local regulation. Recycling is preferred to disposal or incineration.

Ecological information : Avoid release to the environment.

SECTION 14: Transport information

In accordance with DOT / TDG / IMDG / IATA

DOT	TDG	IMDG	IATA
14.1. UN number			
Not applicable	Not applicable	3334	3334
14.2. Proper Shipping Name			
Combustible liquid, n.o.s. (CONTAINS : ethyl-2-cyanoacrylate)	Not applicable	AVIATION REGULATED LIQUID, N.O.S. (Cyanoacrylate ester)	Aviation regulated liquid, n.o.s. (Cyanoacrylate ester)
14.3. Transport hazard class(es)			
Combustible liquid	Not applicable	9	9
Not applicable	Not applicable		
14.4. Packing group			
III	Not applicable	Not applicable	III
14.5. Environmental hazards			
Dangerous for the environment: No	Not applicable	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No
No supplementary information available			

14.6. Special precautions for user

DOT

UN-No.(DOT) : NA1993

DOT Special Provisions (49 CFR 172.102) : 148 - For domestic transportation, this entry directs to § 173.66 for: a. The standards for transporting a single bulk hazardous material for blasting by cargo tank motor vehicles (CTMV); and b. The standards for CTMVs capable of transporting multiple hazardous materials for blasting in bulk and non-bulk packagings (i.e, a multipurpose bulk truck (MBT)).
IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672).
T1 - 1.5 178.274(d)(2) Normal..... 178.275(d)(2)
TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = 97 / 1 + a (tr - tf) Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.

DOT Packaging Exceptions (49 CFR 173.xxx) : 150

DOT Packaging Non Bulk (49 CFR 173.xxx) : 203

DOT Packaging Bulk (49 CFR 173.xxx) : 241

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 60 L

DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 220 L

DOT Vessel Stowage Location : A - The material may be stowed ‘‘on deck’’ or ‘‘under deck’’ on a cargo vessel and on a passenger vessel.

TDG

Not applicable

IMDG

Special provision (IMDG)	:	960
Stowage category (IMDG)	:	None
Properties and observations (IMDG)	:	Not subject to the provisions of this Code but may be subject to provisions governing the transport of dangerous goods by other modes.

IATA

Transport regulations (IATA)	:	Primary packs containing less than 500ml are unregulated by this mode of transport and may be shipped unrestricted. (https://www.echa.europa.eu/web/guest/registration-dossier/-/registered-dossier/20329/9/?documentUUID=e8c038d3-2394-4724-af99-7188fb6e90e7)
PCA Excepted quantities (IATA)	:	E1
PCA Limited quantities (IATA)	:	Y964
PCA limited quantity max net quantity (IATA)	:	30kgG
PCA packing instructions (IATA)	:	964
PCA max net quantity (IATA)	:	100L
CAO packing instructions (IATA)	:	964
CAO max net quantity (IATA)	:	220L
Special provision (IATA)	:	A27
ERG code (IATA)	:	9A

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

M745-1260 Medium/Thin Viscosity Surface Insensitive Cyanoacrylate Adhesive	
SARA Section 311/312 Hazard Classes	Fire hazard Health hazard - Skin corrosion or Irritation Health hazard - Serious eye damage or eye irritation Health hazard - Specific target organ toxicity (single or repeated exposure)

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

15.2. International regulations

CANADA

ethyl-2-cyanoacrylate (7085-85-0)
Listed on the Canadian DSL (Domestic Substances List)

Polymethyl Methacrylate (9011-14-7)
Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

ethyl-2-cyanoacrylate (7085-85-0)
Listed on INSQ (Mexican National Inventory of Chemical Substances)

Polymethyl Methacrylate (9011-14-7)
Listed on INSQ (Mexican National Inventory of Chemical Substances)

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date : 4/12/2024

Data sources : UNECE, http://www.unece.org/. Supplier's safety documents. ECHA (European Chemicals Agency).

Other information : Users should make their own investigations to determine the suitability of the information for their particular purposes.

Full text of H-phrases	
H227	Combustible liquid
H315	Causes skin irritation
H319	Causes serious eye irritation
H335	May cause respiratory irritation

Abbreviations and acronyms	
CAS-No.	Chemical Abstract Service number
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC50	Median effective concentration
ED	Endocrine disrupting properties
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
IOELV	Indicative Occupational Exposure Limit Value
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level

Abbreviations and acronyms	
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
TRGS	Technical Rules for Hazardous Substances
VOC	Volatile Organic Compounds

Hazard Rating

Health : 2 Moderate Hazard - Temporary or minor injury may occur

Flammability : 2 Moderate Hazard - Materials which must be moderately heated or exposed to high ambient temperatures before ignition will occur. Includes liquids having a flash point at or above 100 F but below 200 F. (Classes II IIIA)

Physical : 1 Slight Hazard - Materials that are normally stable but can become unstable (self-react) at high temperatures and pressures. Materials may react non-violently with water or undergo hazardous polymerization in the absence of inhibitors.

Personal protection : B - Safety glasses, Gloves

Indication of changes:

Initial preparation date.

Section	Changed item	Change	Comments
	Revision date	Modified	No additional information available
	Supersedes	Modified	No additional information available
	Product form	Added	No additional information available
	Physical state	Added	No additional information available
	Product code	Added	No additional information available
	Other means of identification	Added	No additional information available
1	Recommended use	Added	No additional information available
1	Product code	Added	No additional information available
1	Name	Modified	No additional information available
1	Use of the substance/mixture	Modified	No additional information available
1	Product code	Added	No additional information available
1	Recommended use	Added	No additional information available
2.2	Precautionary statements (GHS US)	Modified	No additional information available
2.3	Other hazards which do not result in classification	Modified	No additional information available
3	Precautionary statements (GHS US)	Modified	No additional information available

4	Most Important Symptoms/Effects	Added	No additional information available
4	Expected Symptoms/Effects, Acute and Delayed	Added	No additional information available
4	Other medical advice or treatment	Modified	No additional information available
4	Other medical advice or treatment	Added	No additional information available
4	Symptoms/effects after ingestion	Modified	No additional information available
4	Symptoms/effects after skin contact	Modified	No additional information available
4	Symptoms/effects after inhalation	Modified	No additional information available
4	Symptoms/effects after eye contact	Modified	No additional information available
4	Symptoms/effects	Modified	No additional information available
4	First-aid measures after ingestion	Modified	No additional information available
4	First-aid measures after eye contact	Modified	No additional information available
4	First-aid measures after skin contact	Modified	No additional information available
4	First-aid measures after inhalation	Modified	No additional information available
5.1	Unsuitable extinguishing media	Modified	No additional information available
5.1	Suitable extinguishing media	Modified	No additional information available
5.2	Reactivity in case of fire	Modified	No additional information available
5.2	Hazardous decomposition products in case of fire	Added	No additional information available
5.2	Explosion hazard	Modified	No additional information available
5.2	General measures	Added	No additional information available
5.2	Hazardous decomposition products in case of fire	Added	No additional information available
5.3	Protection during firefighting	Modified	No additional information available
5.3	Firefighting instructions	Modified	No additional information available
5.3	Other information	Modified	No additional information available
6	Reference to other sections (8, 13)	Modified	No additional information available
6	Methods for cleaning up	Modified	No additional information available
6	For containment	Modified	No additional information available
6	Other information	Added	No additional information available
6	Emergency procedures	Modified	No additional information available
6	Protective equipment	Modified	No additional information available
6	Emergency procedures	Modified	No additional information available
6	General measures	Added	No additional information available
7.1	Precautions for safe handling	Modified	No additional information available
7.1	Hygiene measures	Modified	No additional information available
7.1	Additional hazards when processed	Added	No additional information available
7.2	Storage area	Added	No additional information available
7.2	Packaging materials	Added	No additional information available

7.2	Incompatible materials	Added	No additional information available
7.2	Technical measures	Modified	No additional information available
7.2	Storage conditions	Modified	No additional information available
7.2	Storage temperature	Modified	No additional information available
8	Regulatory reference	Added	No additional information available
8.1	Remark (ACGIH)	Added	No additional information available
8.1	Local name	Added	No additional information available
8.2	Respiratory protection	Modified	No additional information available
8.2	Materials for protective clothing	Modified	No additional information available
8.2	Hand protection	Modified	No additional information available
8.2	Eye protection	Modified	No additional information available
8.2	Personal protective equipment	Modified	No additional information available
8.2	Appropriate engineering controls	Modified	No additional information available
8.2	Environmental exposure controls	Added	No additional information available
8.2	Personal protective equipment	Added	No additional information available
8.2	Skin and body protection	Modified	No additional information available
8.2	Respiratory protection	Modified	No additional information available
9	Oxidizing properties	Added	No additional information available
9	Explosive properties	Added	No additional information available
9	Viscosity, dynamic	Added	No additional information available
9	Partition coefficient n-octanol/water (Log Pow)	Added	No additional information available
9	Melting point	Added	No additional information available
9	Auto-ignition temperature	Added	No additional information available
9	Boiling point	Added	No additional information available
9	Flash point	Added	No additional information available
9	pH	Modified	No additional information available
9	Auto-ignition temperature	Modified	No additional information available
9	Other properties	Added	No additional information available
9	Appearance	Modified	No additional information available
9	Odor	Modified	No additional information available
9	Boiling point	Modified	No additional information available
9	Flammability (solid, gas)	Added	No additional information available
9	Solubility	Modified	No additional information available
9	Water solubility	Added	No additional information available
9	Particle size	Added	No additional information available
9	Other properties	Added	No additional information available

10	Hardening time	Added	No additional information available
10	Hazardous decomposition products	Modified	No additional information available
10	Possibility of hazardous reactions	Modified	No additional information available
10	Incompatible materials	Modified	No additional information available
10	Chemical stability	Modified	No additional information available
10	Conditions to avoid	Modified	No additional information available
11	Reason for no classification	Added	No additional information available
11	Reason for no classification	Added	No additional information available
11	Reason for no classification	Added	No additional information available
11	Reason for no classification	Added	No additional information available
11	Reason for no classification	Added	No additional information available
11	Reason for no classification	Added	No additional information available
11	Reason for no classification	Added	No additional information available
11	Potential Adverse human health effects and symptoms	Added	No additional information available
12.1	Ecology - water	Added	No additional information available
12.1	Ecology - general	Modified	No additional information available
12.2	Persistence and degradability	Modified	No additional information available
12.2	Persistence and degradability	Modified	No additional information available
12.3	Partition coefficient n-octanol/water (Log Pow)	Added	No additional information available
12.4	Ecology - soil	Added	No additional information available
13	Regional waste regulation	Modified	No additional information available
13	Ecology - waste materials	Modified	No additional information available
13	Product/Packaging disposal recommendations	Added	No additional information available
13	Waste treatment methods	Modified	No additional information available
14	Proper Shipping Name (DOT)	Modified	No additional information available
14	Transport regulations (IATA)	Added	No additional information available
15	SARA Section 311/312 Hazard Classes	Added	No additional information available
16	Data sources	Added	No additional information available
16	Abbreviations and acronyms	Added	No additional information available
16	Other information	Modified	No additional information available

Safety Data Sheet (SDS), USA

DISCLAIMER OF LIABILITY The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable

M745- Medium Viscosity Cyanoacrylate Adhesives

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
SDS ID: 101488
Issue date: 12/1/2015 Revision date: 4/8/2022 Supersedes: 7/5/2021 Version: 1.4

SECTION 1: Identification

1.1. Identification

Product form	:	Mixture
Name	:	M745- Medium Viscosity Cyanoacrylate Adhesives
Product code	:	**M745-1242 (1 Oz); M745-1300 (2 Oz); M745-1310 (8 Oz)**
Other means of identification	:	Cyanoacrylate Adhesive

1.2. Recommended use and restrictions on use

Use of the substance/mixture	:	Adhesives, sealants

1.3. Supplier

Supplier
RPM Industrial Coatings Group
3194 B Hickory Blvd.
Hudson, NC 28638
Phone: 828-728-8266
Fax: 828-728-2409

1.4. Emergency telephone number

Emergency number	:	CHEMTREC (800) 424-9300 CHEMTREC® International Emergency number: 703-527-3887

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Flammable liquids Category 4	H227	Combustible liquid
Skin corrosion/irritation Category 2	H315	Causes skin irritation
Serious eye damage/eye irritation Category 2A	H319	Causes serious eye irritation
Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation	H335	May cause respiratory irritation

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US) :

Signal word (GHS US) : Warning

Hazard statements (GHS US) :
H227 - Combustible liquid
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H335 - May cause respiratory irritation

Precautionary statements (GHS US) :
P261 - Avoid breathing fume, vapors.
P271 - Use only outdoors or in a well-ventilated area.
P280 - Wear eye protection, protective gloves.

P302+P352 - If on skin: Wash with plenty of soap and water.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 - If eye irritation persists: Get medical advice/attention.
P362 - Take off contaminated clothing and wash before reuse.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards which do not result in classification

Other hazards which do not result in classification : Adhesive containing cyanoacrylates. Cyanoacrylate. Danger. Bonds skin and eyes in seconds. Keep out of the reach of children. Contact with skin through cellulose based fabrics (i.e cotton, rayon, linen, viscose) generates heat and may cause burns.

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS US classification
ethyl-2-cyanoacrylate	CAS-No.: 7085-85-0	≥ 75	Flam. Liq. 4, H227 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general : If you feel unwell, seek medical advice (show the label where possible). Never give anything by mouth to an unconscious person.

First-aid measures after inhalation : Overexposure may be irritating to the respiratory system. If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If you feel unwell, seek medical advice. Allow affected person to breathe fresh air. Allow the victim to rest.

First-aid measures after skin contact : Do not pull solidified product away from the skin. Do not remove clothing if it sticks to the skin. Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. Contact with skin through cellulose based fabrics (i.e cotton, rayon, linen, viscose) generates heat and may cause burns. . In the case of large spills on the skin, superficial burns may occur - treat accordingly. If skin irritation or rash occurs: Get medical advice/attention. Get immediate medical advice/attention.

First-aid measures after eye contact : Cyanoacrylates bonds the eyelids in seconds. Immediately flush eyes thoroughly with water for at least 15 minutes. Do not try to open the eyes by manipulation. Obtain medical attention if pain, blinking or redness persists.

First-aid measures after ingestion : Ingestion unlikely.

4.2. Most important symptoms and effects (acute and delayed)

Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met.

Symptoms/effects	:	Irritation of the eye tissue. Causes skin and eye irritation. Not expected to present a significant hazard under anticipated conditions of normal use.
Symptoms/effects after inhalation	:	May cause drowsiness or dizziness. May cause respiratory irritation.
Symptoms/effects after skin contact	:	May cause irritation to skin. Cyanoacrylate. Danger. Bonds skin and eyes in seconds. Keep out of the reach of children.
Symptoms/effects after eye contact	:	Causes eye irritation. Cyanoacrylates bonds the eyelids in seconds.
Symptoms/effects after ingestion	:	Ingestion unlikely. Unlikely to occur since material will harden in the mouth.

4.3. Immediate medical attention and special treatment, if necessary

IF exposed or concerned: Get medical advice/attention.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	:	alcohol resistant foam. Dry powder. Carbon dioxide. Sand.
Unsuitable extinguishing media	:	Solid water jet ineffective as extinguishing medium. Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Fire hazard	:	Combustible liquid.
Reactivity in case of fire	:	May polymerize on exposure to temperature rise with pressure rise and possible bursting of container.
Hazardous decomposition products in case of fire	:	Combustion products may include the following: carbon oxides (CO, CO2) (carbon monoxide, carbon dioxide) nitrogen oxides (NO, NO_2 etc.).

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions	:	Exercise caution when fighting any chemical fire. IF exposed to fire cool the closed containersby spraying with water. Do not allow water to enter the vessels, a violent reaction may occur.
Protection during firefighting	:	Do not enter fire area without proper protective equipment, including respiratory protection.
Other information	:	Do not allow run-off from fire fighting to enter drains or water courses.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	:	Eliminate every possible source of ignition. Ensure adequate ventilation. Avoid all contact with skin, eyes, or clothing. Handle in accordance with good industrial hygiene and safety procedures.

6.1.1. For non-emergency personnel

Protective equipment	:	Use appropriate personal protection equipment (PPE).
Emergency procedures	:	Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment	:	Equip cleanup crew with proper protection.
Emergency procedures	:	Evacuate unnecessary personnel. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use appropriate personal protection equipment (PPE). Ventilate area.

6.2. Environmental precautions

Do not allow water (or moist air) contact with this material. Avoid release to the environment. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Contain the spilled material by bunding. Absorb excess liquid spillage on inorganic adsorbent material such as fine sand, brick dust etc. Place spent adsorbent in sealed packages and contact specialist waste disposal contractor. Keep away from ignition sources.

Methods for cleaning up : Take up small spills with dry chemical absorbent. (Do not use cloths; rags or materials made from cellulose fibers). Use non-sparking tools. Collect spillage. Store away from other materials.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection. For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Avoid contact of substance with water. Do not eat, drink or smoke when using this product. Do not get in eyes, on skin, or on clothing. Keep away from sources of ignition - No smoking. Use only non-sparking tools. Use only outdoors or in a well-ventilated area. Use personal protective equipment as required. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. Presents no particular risk when handled in accordance with good occupational hygiene practice.

Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Do not eat, drink or smoke in areas where product is used. Handle in accordance with good industrial hygiene and safety procedures.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Comply with applicable regulations. Store in accordance with local, regional, national or international regulation.

Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Direct sunlight, Heat sources, Sources of ignition, Water, humidity. Store in a dry place. Store at temperatures not exceeding 24°C / 75°F. Keep container closed when not in use.

Incompatible products : Amines. alcohols. Oxidising agents. Water. Strong bases. Strong acids.

Incompatible materials : Sources of ignition. Direct sunlight. Water, humidity.

Storage temperature : 2 – 24 °C

Storage area : For optimum shelf-life, it is recommended to keep the product in a refrigerated storage area.

Packaging materials : Keep only in original container.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

M745- Medium Viscosity Cyanoacrylate Adhesives

No additional information available

ethyl-2-cyanoacrylate (7085-85-0)

USA - ACGIH - Occupational Exposure Limits

Local name	Ethyl cyanoacrylate
ACGIH OEL TWA [ppm]	0.2 ppm
ACGIH OEL STEL [ppm]	1 ppm
Remark (ACGIH)	TLV® Basis: Eye & URT irr; asthma. Notations: DSEN; RSEN
Regulatory reference	ACGIH 2022

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure all national/local regulations are observed. Avoid all unnecessary exposure.

Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Protective clothing. Safety glasses. Gloves. Avoid all unnecessary exposure.

Materials for protective clothing:
Keep suitable chemically resistant protective clothing readily available for emergency use

Hand protection:				
Chemically resistant protective gloves				
Type	**Material**	**Permeation**	**Thickness (mm)**	**Penetration**
Reusable gloves	Nitrile rubber (NBR), Fluoroelastomer (FKM)	6 (> 480 minutes)	0.5mm	

Eye protection:		
Chemical goggles or safety glasses		
Type	**Field of application**	**Characteristics**
Safety glasses	Droplet	clear, With side shields

Skin and body protection:
Wear suitable protective clothing. Do not wear protective clothing based on cellulose fibers (e.g cotton, linen, viscose).

Respiratory protection:		
Where exposure through inhalation may occur from use, respiratory protection equipment is recommended		
Device	**Filter type**	**Condition**
Gas mask	Type A - High-boiling (>65 °C) organic compounds	If conc. in air > exposure limit

Personal protective equipment symbol(s):

Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid

Appearance : Colorless liquid.

Color : Colorless

Odor : Irritating sharp

Odor threshold : No data available

pH : No data available

Melting point : No data available

Freezing point	:	No data available
Boiling point	:	> 300 °F
Flash point	:	> 176 °F
Relative evaporation rate (butyl acetate=1)	:	No data available
Flammability (solid, gas)	:	Non flammable.
Vapor pressure	:	< 0.2 mm Hg
Relative vapor density at 20 °C	:	No data available
Relative density	:	No data available
Solubility	:	Insoluble in water.
Partition coefficient n-octanol/water (Log Pow)	:	No data available
Auto-ignition temperature	:	> 450 °C
Decomposition temperature	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	≈ 600 cP
Explosion limits	:	No data available
Explosive properties	:	No data available
Oxidizing properties	:	Not oxidising.

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known under normal conditions of use.

10.2. Chemical stability

Combustible liquid. Polymerizes on exposure to water (moisture).

10.3. Possibility of hazardous reactions

Stable under normal conditions of use. Polymerizes on exposure to temperature rise: pressure build-up may cause closed container to burst.

10.4. Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Direct sunlight. Extremely high or low temperatures. Moisture.

10.5. Incompatible materials

Amines. alcohols. Strong oxidizers. Strong acids. Strong bases.

10.6. Hazardous decomposition products

When exposed to high temperatures may produce hazardous decomposition products such as carbon monoxide and dioxide, smoke, nitrogen oxides (NOx). irritating fumes.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	:	Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (dermal)	:	Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation)	:	Not classified (Based on available data, the classification criteria are not met)

ethyl-2-cyanoacrylate (7085-85-0)	
LD50 oral rat	> 5000 mg/kg body weight (Equivalent or similar to OECD 423, Rat, Male, Experimental value, Oral, 14 day(s))
LD50 dermal rabbit	> 2000 mg/kg body weight (Equivalent or similar to OECD 402, 24 h, Rabbit, Male, Experimental value, Skin, 14 day(s))

Skin corrosion/irritation : Causes skin irritation.
Serious eye damage/irritation : Causes serious eye irritation.
Respiratory or skin sensitization : Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity : Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity : Not classified (Based on available data, the classification criteria are not met)
Reproductive toxicity : Not classified (Based on available data, the classification criteria are not met)
STOT-single exposure : May cause respiratory irritation.

ethyl-2-cyanoacrylate (7085-85-0)	
STOT-single exposure	May cause respiratory irritation.

STOT-repeated exposure : Not classified (Based on available data, the classification criteria are not met)
Aspiration hazard : Not classified
(Based on available data, the classification criteria are not met)
Viscosity, kinematic : No data available
Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met.
Symptoms/effects : Irritation of the eye tissue. Causes skin and eye irritation. Not expected to present a significant hazard under anticipated conditions of normal use.
Symptoms/effects after inhalation : May cause drowsiness or dizziness. May cause respiratory irritation.
Symptoms/effects after skin contact : May cause irritation to skin. Cyanoacrylate. Danger. Bonds skin and eyes in seconds. Keep out of the reach of children.
Symptoms/effects after eye contact : Causes eye irritation. Cyanoacrylates bonds the eyelids in seconds.
Symptoms/effects after ingestion : Ingestion unlikely. Unlikely to occur since material will harden in the mouth.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Not classified for aquatic hazard due to rapid polymerization in contact with water.

12.2. Persistence and degradability

M745- Medium Viscosity Cyanoacrylate Adhesives	
Persistence and degradability	No data available. Not established.

ethyl-2-cyanoacrylate (7085-85-0)	
Persistence and degradability	Readily biodegradable in water.

12.3. Bioaccumulative potential

M745- Medium Viscosity Cyanoacrylate Adhesives	
Bioaccumulative potential	Not established.

ethyl-2-cyanoacrylate (7085-85-0)	
Partition coefficient n-octanol/water (Log Pow)	0.776 (Published data)
Bioaccumulative potential	Low bioaccumulation potential. (Log Kow < 4).

12.4. Mobility in soil

M745- Medium Viscosity Cyanoacrylate Adhesives	
Ecology - soil	Mobility is considered to be very low due to rapid polymerization with water.

ethyl-2-cyanoacrylate (7085-85-0)	
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	0.834 (calculated value)
Ecology - soil	Highly mobile in soil.

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Disposal to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Sewage disposal recommendations : Do not discharge into drains or rivers. Avoid discharge to the environment.

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

In accordance with DOT / TDG / IMDG / IATA

DOT	TDG	IMDG	IATA
14.1. UN number			
3334	Not applicable	3334	3334
14.2. Proper Shipping Name			
Aviation regulated liquid, n.o.s.	Not applicable	AVIATION REGULATED LIQUID, N.O.S.	Aviation regulated liquid, n.o.s.
14.3. Transport hazard class(es)			
9	Not applicable	9	9
 Not applicable			
14.4. Packing group			
Not applicable	Not applicable	Not applicable	III
14.5. Environmental hazards			
Dangerous for the environment: No	Not applicable	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No
No supplementary information available			

14.6. Special precautions for user

DOT

UN-No.(DOT)	:	UN3334
DOT Special Provisions (49 CFR 172.102)	:	A35 - This includes any material which is not covered by any of the other classes but which has an anesthetic, narcotic, noxious or other similar properties such that, in the event of spillage or leakage on an aircraft, extreme annoyance or discomfort could be caused to crew members so as to prevent the correct performance of assigned duties. A189 - Except where the defining criteria of another class or division are met, concentrations of formaldehyde solution: a. With less than 25 percent but not less than 10 percent formaldehyde, must be described as UN3334, Aviation regulated liquid, n.o.s; and b. With less than 10 percent formaldehyde, are not subject to this subchapter.
DOT Packaging Exceptions (49 CFR 173.xxx)	:	155
DOT Packaging Non Bulk (49 CFR 173.xxx)	:	204
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	:	450 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	:	450 L
DOT Vessel Stowage Location	:	A - The material may be stowed ‘‘on deck’’ or ‘‘under deck’’ on a cargo vessel and on a passenger vessel.

TDG

Emergency Response Guide (ERG) Number	:	171

IMDG

Special provision (IMDG)	:	960
Stowage category (IMDG)	:	None
Properties and observations (IMDG)	:	Not subject to the provisions of this Code but may be subject to provisions governing the transport of dangerous goods by other modes.

IATA

PCA Excepted quantities (IATA)	:	E1
PCA Limited quantities (IATA)	:	Y964
PCA limited quantity max net quantity (IATA)	:	30kgG
PCA packing instructions (IATA)	:	964
PCA max net quantity (IATA)	:	100L
CAO packing instructions (IATA)	:	964
CAO max net quantity (IATA)	:	220L
Special provision (IATA)	:	A27
ERG code (IATA)	:	9A

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

M745- Medium Viscosity Cyanoacrylate Adhesives	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard Fire hazard Reactive hazard

Commercial status of components according to the United States Environmental Protection Agency’s Toxic Substances Control Act (TSCA):

Name	CAS-No.	Listing	Commercial status	Flags
Proprietary Acrylated Monomer	Trade Secret	Not present	-	
ethyl-2-cyanoacrylate	7085-85-0	Present	Active	

15.2. International regulations

CANADA

ethyl-2-cyanoacrylate (7085-85-0)
Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

M745- Medium Viscosity Cyanoacrylate Adhesives
This product is listed on the TSCA inventory or otherwise complies with TSCA premanufacture notification requirements

ethyl-2-cyanoacrylate (7085-85-0)
Listed on INSQ (Mexican National Inventory of Chemical Substances)

15.3. US State regulations

Component	State or local regulations
ethyl-2-cyanoacrylate(7085-85-0)	U.S. - New Jersey - Right to Know Hazardous Substance List

SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date : 04/08/2022

Data sources : ECHA (European Chemicals Agency). Supplier's safety documents.

Other information : None.

Full text of H-phrases	
H227	Combustible liquid
H315	Causes skin irritation
H319	Causes serious eye irritation
H335	May cause respiratory irritation

Hazard Rating

Health : 2 Moderate Hazard - Temporary or minor injury may occur

Flammability : 2 Moderate Hazard - Materials which must be moderately heated or exposed to high ambient temperatures before ignition will occur. Includes liquids having a flash point at or above 100 F but below 200 F. (Classes II & IIIA)

Physical : 1 Slight Hazard - Materials that are normally stable but can become unstable (self-react) at high temperatures and pressures. Materials may react non-violently with water or undergo hazardous polymerization in the absence of inhibitors.

Indication of changes:			
Section	**Changed item**	**Change**	**Comments**
	Revision date	Modified	
1	Product code	Modified	
1	Name	Modified	

Safety Data Sheet (SDS), USA

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INSTANT ADHESIVE ACTIVATOR AEROSOL

TECHNICAL DATA SHEET

PRODUCT NUMBER	DESCRIPTION
M745-2012	INSTANT ADHESIVE ACTIVATOR AEROSOL

PRODUCT DESCRIPTION:

Mohawk's Aerosol Activator is used to speed the cure of the Instant Adhesive product line. Cyanoacrylate glue activator in aerosol form, makes using CA's easier and safer than ever. The can will not spill or leak like pump type activators, and the fine atomization and consistent coverage promote more even curing. The carrier solvent reduces "chlorosis", the whitening often experienced with other activators. Technicians have reported using less activator than with the pump types, with less mess. 10 oz.

ADVANTAGES:

1. Easy to use.
2. Cure time is drastically reduced.
3. Non-yellowing.
4. Finer – more controllable mist than with pump type activator.
5. More economical – you use less product than with pump type activator.

PHYSICAL PROPERTIES AND SPECIFICATIONS

Technology	accelerator for cyanoacrylate adhesives
Color	none
Sheen	none
Viscosity	N/A
WPG	5.322265047 lbs/gal
Solids by Volume	0.000000000 ±1%
Solids by Weight	0.000000000 ±1%
Flash Point	-76.000000000 °F
HMIS	H: 2, F: 4, R: 0, P: X
Coating VOC (g/l)	637.745731527 g/l
Coating VOC (Lb/Gal)	5.322265047 lbs/gal
Material VOC (g/l)	637.745731522 g/l
Material VOC (Lb/Gal)	5.322265047 lbs/gal
#VOC/#Solid	0.000000000 lbs/lbs solid
VHAP Ratio (#VHAP/#Solid)	0.000000000
Spread Rate	0.000000000 sq. ft./gal @ 1.0 mil DFT (no loss)
Catalyst/Ratio	N/A
Reducer	N/A
Retarder	N/A
AirDry	N/A
Oven Dry	N/A
Shelf-Life (Unopened)	36 months
Pot-Life (Catalyzed)	N/A
Recoat Instruction	N/A

PH	N/A

DIRECTIONS:
Activator significantly speeds curing. Spray sparingly about 11 inches from target contact surface, apply adhesive to the opposite surface, and assemble. Or apply adhesive , assemble parts, and spray activator topically over joint area. Do not wipe spray that comes in contact with finished surface while wet.

The data on this sheet are calculated values (as formulated) and will not represent exact values for every product. For Safety and Other Precautions, read the SDS before using the product. SDS are available upon request. If Safety Data Sheet is required, contact: Mohawk Finishing Products, a Division of RPM Wood Finishes Group, Inc.; P.O. Box 22000 Hickory, NC 28603; Phone: 1-800-545-0047; Fax: 1-800-721-1545.

Drying times and viscosities reported are as tested under laboratory conditions (77°F (25°C)) with relative humidity of approximately 45%. Changes in temperature and humidity will affect product data.

It is the user's responsibility to verify product compliance with all applicable regulations or permits before proceeding with use. Always pretest any finishing products to verify suitability to the desired use before proceeding with any application. Manufacturer makes no warranties, express or implied, including (but not limited to) warranties of merchantability and fitness for particular purposes. Manufacturer will not be liable for any incidental, consequential or special damages or losses derived, directly or indirectly, from or as a consequence of purchaser's use of this product.