

3. Emissions of volatile organic material, VOM, and operation of the interior mold surface process shall not exceed the following limits:

<u>Material</u>	<u>Usage</u>		<u>VOM Content</u>	<u>VOM Emissions</u>	
	<u>(Gal/Mo)</u>	<u>(Gal/Yr)</u>	<u>(Lb/Gal)</u>	<u>(Tons/Mo)</u>	<u>(Tons/Yr)</u>
Paste Wax	70	432	4.54	0.16	0.98

These limits define the potential emissions of VOM and are based on maximum material usages, maximum VOM content, and limits as requested by the company. Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months.

4. Emissions of volatile organic material, VOM, and operation of the mold filling station shall not exceed the following limits:

<u>Material</u>	<u>Usage</u>	
	<u>(Tons/Mo)</u>	<u>(Tons/Yr)</u>
Polypropylene Glycol	460	5,520
Isocyanates	167	1,968

<u>VOM Emissions</u>	
<u>(Lb/Mo)</u>	<u>(Tons/Yr)</u>
5.0	0.03

These limits define the potential emissions of VOM and are based on maximum material usages and emissions information provided by the company. Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months.

5. Emissions of volatile organic material, VOM, and operation of the tire and vacuum foam crushers and conveyor line shall not exceed the following limits:

<u>Equipment</u>	<u>Polyurethane Foam Process Weight Rate</u>		<u>Emission Factor</u>	<u>VOM Emissions</u>	
	<u>(Ton/Mo)</u>	<u>(Ton/Yr)</u>	<u>(Lb VOM/Ton Yr)</u>	<u>(Lb/Mo)</u>	<u>(Ton/Yr)</u>
Crushers	624	7,488	0.116	72.4	0.43
Conveyor Line	624	7,488	0.56	<u>349.5</u>	<u>2.1</u>
			Total	421.9	2.53

These limits define the potential emissions of VOM and are based on maximum material usages, maximum VOM content, and emission factors as established by the company. Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months.

- 6a. Fuel combustion emissions and operation of the curing oven, air makeup units, and space heater shall not exceed the following limits:

<u>Material</u>	<u>(mmscf/Mo)</u>	<u>(mmscf/Yr)</u>	<u>Pollutant</u>	<u>Emission Factor (Lb/mmscf)</u>	<u>Emissions (Ton/Mo)</u>	<u>(Ton/Yr)</u>
Natural Gas	11	110	NO _x	100	0.6	5.5
			CO	84	0.5	4.6
			VOM	5.5	0.03	0.3

These limits define the potential emissions of NO_x, CO, TSP, and VOM and are based on maximum fuel usage and standard emission factors. Compliance with annual limits shall be determined from a running total of 12 months of data.

- b. Natural gas shall be the only fuel used in the fuel combustion emission sources. Use of any other fuel other than natural gas requires a permit revision.
- 7a. This permit is issued based on negligible emissions of VOM from the 8 storage tanks. For this purpose, emissions shall not exceed nominal emission rates of 0.1 lb/hour and 0.44 ton/year.
- b. This permit is issued based on negligible emissions of VOM from the chemical compounding process. For this purpose, emissions shall not exceed nominal emission rates of 0.1 lb/hour and 0.44 ton/year.
- c. This permit is issued based on negligible emissions of particulate matter from the two spray booths. For this purpose, emissions shall not exceed nominal emission rates of 0.1 lb/hour and 0.44 ton/year.
- d. This permit is issued based on negligible emissions of VOM from the infrared cure oven. For this purpose, emissions shall not exceed nominal emission rates of 0.3 lb/hour and 0.12 ton/year.
8. The emissions of Hazardous Air Pollutants (HAP) as listed in Section 112(b) of the Clean Air Act shall be less than 10 tons/year of any single HAP and 25 tons/year of any combination of such HAPs. As a result of this condition, this permit is issued based on the emissions of all HAPs from this source not triggering the requirements to obtain a Clean Air Act Permit Program Permit (CAAPP), and Section 112(G) of the Clean Air Act.
- 9a. This permit is issued based on the 8 storage tanks storing materials with a vapor pressure less than 1.0 mmHG at 60°F.
- b. In the event that the operation of this emission unit results in an odor nuisance, the Permittee shall take appropriate and necessary actions to minimize odors, including but not limited to, changes in raw material or installation of controls, in order to eliminate the odor nuisance.

10. The Permittee shall maintain monthly records of the following items:

- a. Amount of each mold release coating used in the spray booths (gallon or lb/month and gallon or ton/year);
- b. VOM content of coating used in the spray booths used (lb VOM/gallon or percent weight);
- c. Calculations of VOM usage in the two spray booths. The following equations shall be used to calculate VOM usage:

$$Te = \sum_i^n AiBi$$

Where:

Te = VOM usage in units of lb/month;

n = Number of different mold release coatings used;

i = Subscript denoting an individual mold release coating;

Ai = Weight of VOM per volume of each mold release coating used each month in units of lbs VOM/gallon or weight percent of VOM of each solvent used each month (% weight); and

Bi = Amount of each mold release coatings used each month in units of gallons/month or lb/month;

- d. Amount of paste wax used in the interior mold process (gallon/month and gallon/year);
- e. VOM content of the paste wax (lb/gallon);
- f. Amount of polypropylene and isocyanate used in the mold filling station (lb/month and tons/year);
- g. Process rate of the tire and vacuum crusher and the conveyor line (tons/month and tons/year);
- h. Plantwide usage of natural gas (mmscf/month and mmscf/year); and
- i. Detailed calculations of VOM emissions (tons/month and tons/year).

11. All records and logs required by this permit shall be retained at a readily accessible location at the source for at least three years from the date of entry and shall be made available for inspection and copying by the Illinois EPA or USEPA upon request. Any records retained in an electronic format (e.g., computer) shall be capable of being retrieved and printed on paper during normal source office hours

so as to be able to respond to an Illinois EPA or USEPA request for records during the course of a source inspection.

12. If there is an exceedance of the requirements of this permit as determined by the records required by this permit, the Permittee shall submit a report to the Illinois EPA's Compliance Section in Springfield, Illinois within 30 days after the exceedance. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the exceedance or violation and efforts to reduce emissions and future occurrences.
13. Two (2) copies of required reports and notifications concerning equipment operation or repairs, performance testing or a continuous monitoring system shall be sent to:

Illinois Environmental Protection Agency
Division of Air Pollution Control
Compliance Section (#40)
P.O. Box 19276
Springfield, Illinois 62794-9276

and one (1) copy shall be sent to the Illinois EPA's regional office at the following address unless otherwise indicated:

Illinois Environmental Protection Agency
Division of Air Pollution Control
9511 West Harrison
Des Plaines, Illinois 60016

14. The Permittee shall submit the following additional information with the Annual Emissions Report, due May 1st of each year: monthly mold release coating usages, monthly paste wax usages, VOM content of each mold release coating and paste wax, and calculations of emissions from the prior calendar year.

If there have been no exceedances during the prior calendar year, the Annual Emission Report shall include a statement to that effect.

It should be noted that this permit has been revised to change the emission limits for the two spray booths and to include the emissions from and operation of the conveyor line and chemical compounding process.

It should be noted that the vacuum for mold vent buddies controlled by a cyclone is exempt from state permit requirements, pursuant to 35 Ill. Adm. Code 201.146(aa).

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If you have any questions on this, please call Tara T. Nguyen-Ede at 217/782-2113.

Donald E. Sutton, P.E.
Manager, Permit Section
Division of Air Pollution Control

DES:TNE:psj

cc: Illinois EPA, FOS Region 1
Illinois EPA, Compliance Section
Lotus Notes

Attachment A - Emission Summary

This attachment provides a summary of the maximum emissions from the polyurethane foam manufacturing facility operating in compliance with the requirements of this federally enforceable permit. In preparing this summary, the Illinois EPA used the annual operating scenario which results in maximum emissions from such a plant. The resulting maximum emissions are well below the levels, e.g., 25 tons per year of VOM at which this source would be considered a major source for purposes of the Clean Air Act Permit Program. Actual emissions from this source will be less than predicted in this summary to the extent that less material is handled, and control measures are more effective than required in this permit.

1. Emissions of volatile organic material (VOM) and operation of the two spray booths shall not exceed the following limits:

VOM Usage		VOM Emissions	
<u>(Tons/Mo)</u>	<u>(Tons/Yr)</u>	<u>(Tons/Mo)</u>	<u>(Tons/Yr)</u>
2.0	20.0	2.0	20.0

These limits define the potential emissions of VOM and are based on individual coating usages, maximum VOM content, and limits as requested by the company. VOM usage shall be calculated according to the equation in Condition 10(c). Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months.

2. Emissions of volatile organic material, VOM, and operation of the interior mold surface process shall not exceed the following limits:

<u>Material</u>	Usage		VOM Content	VOM Emissions	
	<u>(Gal/Mo)</u>	<u>(Gal/Yr)</u>	<u>(Lb/Gal)</u>	<u>(Tons/Mo)</u>	<u>(Tons/Yr)</u>
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4. Emissions of volatile organic material, VOM, and operation of the tire and vacuum foam crushers and conveyor line shall not exceed the following limits:

<u>Equipment</u>	<u>Polyurethane Foam</u>		<u>Emission</u> <u>Factor</u>	<u>VOM Emissions</u>	
	<u>(Ton/Mo)</u>	<u>(Ton/Yr)</u>		<u>(Lb VOM/Ton Yr)</u>	<u>(Lb/Mo)</u>
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				<u>Factor</u> <u>(Lb/mmscf)</u>	<u>(Ton/Mo)</u>	<u>(Ton/Yr)</u>
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			CO	84	0.5	4.6
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