

Section 1 - Product and Company Identification

Hazard Label DANGER Extremely Flammable Liquid

Company Information

Johns Manville
Roofing Systems Group
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Telephone: 303-978-2000 8:00AM-5:00PM M-F
Internet Address: <http://www.jm.com>
Emergency: 800-424-9300 (Chemtrec, In English)

Trade Names: JM TPO Primer

Use: This product is used to clean and prime TPO membranes.

Section 2 - Hazards Identification

Emergency Overview

DANGER: Extremely flammable liquid and vapor. Vapor may cause flash fire. Use water spray to cool materials in or near a fire. Fire may be difficult to extinguish. Vapors may travel, and can be ignited by a remote source.

HMIS Ratings: Health = 2, Fire = 3, Reactivity = 0

Inhalation

Irritation of the upper respiratory tract, coughing, and congestion may occur in extreme exposures. Severe irritation of the mouth, nose, and throat, as well as signs of central nervous system depression (drowsiness, dizziness, headache), may occur upon inhalation of vapors or gases.

Skin

Drying of skin, dermatitis, and blistering may occur following prolonged exposures.

Absorption

Toluene can be absorbed by skin, mucous membranes, and eyes, either by direct contact, or exposure to vapors. Absorption may result in over-exposure to toluene, despite air levels that are within the applicable exposure limits.

Ingestion

This product is not intended to be ingested under normal conditions of use. May be harmful if swallowed. May cause gastrointestinal irritation and disturbances. May cause effects similar to those for inhalation exposure. Aspiration into the lungs may cause lung inflammation and other lung injury.

Eyes

Irritation, redness, and burning in eyes may occur.

Primary Routes of Entry (Exposure)

Inhalation, skin, and eye contact.

Target Organs

Skin, eye, lungs, central nervous system (CNS), respiratory system, kidney, liver.

Medical Conditions Aggravated by Exposure

Pre-existing eye, skin, respiratory, central nervous system (CNS), liver and kidney diseases or conditions.

Section 3 - Composition/Information on Ingredients

CAS #	Component	Percent
108-88-3	Toluene	20-40
64742-89-8	Solvent naphtha (petroleum), light aliphatic	40-60

General Product Description

Clear liquid with solvent odor.

Section 4 - First Aid Measures

First Aid: Inhalation

If the affected person is having difficulty breathing, administer oxygen or apply artificial respiration and immediately contact a medical professional.

First Aid: Skin

Remove contaminated clothing. Wash exposed areas with soap and water. If irritation develops or persists, seek medical attention. Launder contaminated clothing before reuse.

First Aid: Ingestion

Product is not intended to be ingested or eaten. If this product is ingested, do not induce vomiting and seek medical attention immediately.

First Aid: Eyes

Flush eyes with large amounts of water until irritation subsides. If irritation persists, seek medical attention.

First Aid: Notes to Physician

Treatment for inhalation, skin contact, or ingestion should be symptomatic. Inhalation of high concentrations of this material, as could occur in enclosed spaces or during deliberate abuse, may be associated with cardiac arrhythmias.

Section 5 - Fire Fighting Measures

Flash Point: 18°F/-7.8°C

Method Used: Estimate based on the flash point of the most volatile component.

Upper Flammable Limit (UFL): Not determined

Lower Flammable Limit (LFL): 1.2%

Auto Ignition: Not determined

Flammability Classification: Flammable

Rate of Burning: Not determined

General Fire Hazards

DANGER: EXTREMELY FLAMMABLE liquid and vapor.

Keep away from heat, sparks, and flame. Material is highly volatile and readily gives off vapors which are heavier than air and may travel along the ground or be moved by ventilation and ignited by pilot lights, other flames, sparks heaters, smoking, electric motors, static discharge, or other ignition sources at locations distant from material handling point. Keep container closed. Use with adequate ventilation.

NFPA Ratings: Health = 2, Fire = 3, Reactivity = 0

Hazardous Combustion Products

Carbon monoxide, carbon dioxide, halogenated hydrocarbons, nitrogen oxides, and various hydrocarbons.

Extinguishing Media

Carbon dioxide (CO₂), dry chemical.

Fire Fighting Equipment/Instructions

Use NIOSH-approved self-contained breathing apparatus operating in the pressure demand mode and full fire fighting protective clothing. Avoid inhalation of vapors.

Section 6 - Accidental Release Measures**Containment Procedures**

Remove all sources of ignition. Evacuate and ventilate spill area. Dam spill area with sand, earth, or other suitable absorbent. Prevent entry of material into sewers, other water sources, or land areas. Wear full protective clothing and respiratory protection during clean-up as required to maintain exposures below the applicable exposure limit. Shovel absorbed material into containers in well-ventilated area.

Clean-Up Procedures

Place in closable container for disposal.

Section 7 - Handling and Storage**Handling Procedures**

Use protective equipment as described in Section 8 of this safety data sheet when handling uncontained material. Handle in accordance with good industrial hygiene and safety practices.

Storage Procedures

Warehouse storage should be in accordance with package directions, if any. Product should be kept in a cool and dry area in original packaging. Do not freeze.

Section 8 - Exposure Controls / Personal Protection**Exposure Guidelines****A: General Product Information**

Protective equipment should be provided as necessary to prevent inhalation of vapors, prolonged skin contact, and to keep exposure levels below the applicable exposure limits.

B: Component Exposure Limits**Toluene (108-88-3)**

ACGIH: 20 ppm TWA

OSHA: 200 ppm TWA

PERSONAL PROTECTIVE EQUIPMENT**Personal Protective Equipment: Eyes/Face**

Safety glasses with side shields or chemical goggles are recommended.

Personal Protective Equipment: Skin

Impervious gloves such as nitrile rubber should be used to help prevent excessive skin contact.

Personal Protective Equipment: Respiratory

A NIOSH approved respirator must be used if vapor concentrations exceed exposure limits.

Ventilation

Local exhaust or general dilution ventilation may be required to maintain exposures below the applicable exposure limits. The need for ventilation systems should be evaluated by a professional industrial hygienist, while the design of specific ventilation systems should be conducted by a professional engineer.

Personal Protective Equipment: General

Protective equipment should be provided as necessary to prevent irritation of the throat, eyes, and skin, and to keep exposures below the applicable exposure limits identified in Section 8.

Section 9 - Physical & Chemical Properties

Appearance:	Clear liquid	Odor:	Solvent odor
Physical State:	liquid	pH:	Not determined
Vapor Pressure:	38 mm Hg @ 68°F, 20°C	Vapor Density:	3.6
Boiling Point:	85°C [185°F]	Melting Point:	Not determined
Solubility (H₂O):	Insoluble	Specific Gravity:	0.75-0.81
Freezing Point:	Not determined	Solids Content	15%
Evaporation Rate:	3.5	Percent Volatile:	85% by weight
VOC:	693 g/L per EPA Test Method 24		

Section 10 - Stability & Reactivity Information**Stability**

These products are not reactive.

Stability: Conditions to Avoid

Keep away from ignition sources. Do not freeze. Do not thin.

Incompatibility

Strong acids, alkalis, and oxidizing agents

Hazardous Polymerization

Will not occur.

Section 11 - Toxicological Information**Acute Toxicity****A: General Product Information**

Vapors from this product may cause eye and upper respiratory irritation, dry throat and mouth, nausea, headache, dizziness, drowsiness, and coma in extreme cases. Prolonged exposures may lead to liver and kidney injury.

B: Component Analysis - LD50/LC50**Toluene (108-88-3)**

Inhalation LC50 Rat: 12.5 mg/L/4H; Inhalation LC50 Rat:>26700 ppm/1H; Oral LD50 Rat:636 mg/kg; Dermal LD50 Rabbit:8390 mg/kg; Dermal LD50 Rat:12124 mg/kg

Solvent naphtha (petroleum), light aliphatic (64742-89-8)

Oral LD50 Rat: 5000 mg/kg; Dermal LD50 Rabbit: 3000 mg/kg

Component Carcinogenicity**Toluene (108-88-3)**

ACGIH: A4 - Not Classifiable as a Human Carcinogen

IARC: Group 3 - Not Classifiable (IARC Monograph 71 [1999], Monograph 47 [1989])

Chronic Toxicity

Prolonged, excessive exposures to vapors may cause nervous system, kidney and liver damage.

Mutagenicity

Some evidence in animals exposed to toluene. Sister chromatid exchanges and chromosome aberrations were elevated in lymphocytes from laboratory workers exposed to toluene and other solvents.

Teratogenicity

Toluene may be harmful to the human fetus based on positive test results with laboratory animals. Case studies show that prolonged intentional abuse of toluene during pregnancy can cause birth defects in humans.

Other Toxicological Information

Reproductive Toxicity: Some evidence from exposure of experimental animals to toluene.

Section 12 - Ecological Information**Ecotoxicity****A: General Product Information**

No data available for this product.

B: Component Analysis - Ecotoxicity - Aquatic Toxicity**Toluene (108-88-3)**

96 Hr LC50 Pimephales promelas: 25 mg/L [flow-through] (1 day old); 96 Hr LC50 Oncorhynchus mykiss: 24.0 mg/L [flow-through]; 96 Hr LC50 Lepomis macrochirus: 24.0 mg/L [static]; 96 Hr LC50 Lepomis macrochirus: 13 mg/L [static]

96 Hr EC50 Selenastrum capricornutum: >433 mg/L

30 min EC50 Photobacterium phosphoreum: 19.7 mg/L

48 Hr EC50 water flea: 11.3 mg/L; 48 Hr EC50 water flea: 310 mg/L; 48 Hr EC50 Daphnia magna: 11.3 mg/L

Solvent naphtha (petroleum), light aliphatic (64742-89-8)

72 Hr EC50 Selenastrum capricornutum: 4700 mg/L

Section 13 - Disposal Considerations**US EPA Waste Number & Descriptions****A: General Product Information**

This product is classified an ignitable hazardous waste by the Resource Conservation and Recovery Act (RCRA; 40 CFR 261: Waste # D001). Dispose of spilled material in accordance with federal, state, and local regulations in a hazardous waste facility. Empty containers must be handled with care due to product residue. Do not heat or cut empty containers with electric or gas torch. If you are unsure of the regulations, contact your local Public Health Department, or the local office of the Environmental Protection Agency (EPA).

B: Component Waste Numbers**Toluene (108-88-3)**

RCRA: waste number U220

Disposal Instructions

Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations.

Section 14 - Transport Information**International Transport Regulations****DOT:**

UN1133, Flammable Liquid (Naphtha, Toluene) n.o.s., 3, PG II

Flammable Liquid Label Required

IATA & IMDG:

Contact JM Product Stewardship

Section 15 - Regulatory Information**US Federal Regulations****A: General Product Information**

SARA 311 Status. The following SARA 311 designations apply to this product: Immediate (acute) health hazard. Delayed (chronic) health hazard. Fire hazard.

B: Component Analysis

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65) and/or CERCLA (40 CFR 302.4).

Toluene (108-88-3)

SARA 313: 1.0 % de minimis concentration

CERCLA: 1000 lb final RQ; 454 kg final RQ

State Regulations**A: General Product Information**

Other state regulations may apply. Check individual state requirements.

Product is not approved in California air districts that restrict VOCs in adhesives.

B: Component Analysis - State

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS #	CA	FL	MA	MN	NJ	PA
Toluene	108-88-3	Yes	No	Yes	Yes	Yes	Yes

The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):
WARNING! This product contains a chemical known to the state of California to cause reproductive/developmental effects.

Component	CAS #
Toluene	108-88-3

A: TSCA Status

This product and its components are listed on the TSCA 8(b) inventory.

None of the components listed in this product are listed on the TSCA Export Notification 12(b) list.

B: Component Analysis - Inventory

Component	CAS #	TSCA	DSL	EINECS
Toluene	108-88-3	Yes	Yes	Yes
Solvent naphtha (petroleum), light aliphatic	64742-89-8	Yes	Yes	Yes

Component Analysis - WHMIS IDL

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Component	CAS #	Minimum Concentration
Toluene	108-88-3	1 %

WHMIS Classification

Controlled Product Classification: B2, D2A, D2B

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations. This SDS contains all the information required by the Controlled Products Regulations.

Section 16 - Other Information

Other Information

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The information herein is presented in good faith and believed to be accurate as of the effective date given. However, no warranty, expressed or implied, is given. It is the buyer's responsibility to ensure that its activities comply with Federal, State or provincial, and local laws.

Date	MSDS #	Reason
02/25/03	3301-1.0000	New product.
02/06/04	3301-1.0001	Regulatory update. Minor edits.
03/25/05	3301-1.0002	Removed UltraGard TPO Membrane Primer and added new UltraGard TPO Membrane Primer. Edits in all sections for product changes.
02/23/07	3301-1.0003	Changed UltraGard to JM in trade names.
04/25/08	3301-1.0004	Regulatory update. Updated SDS to GHS format.

End of Sheet 3301