

Section 1 - Chemical Product and Company Identification

Product Name JM PVC Membrane Adhesive (Low VOC)

CAS# None Assigned

Generic Name Adhesive (Low VOC)

Formula Mixture

Chemical Name: Mixture

Hazard Label ML-5144

Manufacturer Information

Johns Manville
Roofing Systems Group
P.O. Box 5108
Denver, CO 80127 USA

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 PVC Membrane Adhesive (Low VOC)

Section 2 - Composition / Information on Ingredients

CAS #	Component	Percent
Proprietary	Proprietary Non-Hazardous Ingredients	15-45
67-64-1	Acetone	55-75
78-93-3	Methyl ethyl ketone	1-5
108-88-3	Toluene	1-5

Section 3 - Hazards Identification

Emergency Overview

APPEARANCE AND ODOR: Amber liquid. Solvent odor.

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 = 1 PPE = B

Potential Health Effects

Summary

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.

Inhalation

May cause nose or throat irritation. High concentrations may cause acute central nervous system depression characterized by headaches, dizziness, nausea, and confusion.

Skin

May cause dermatitis. May cause defatting and irritation of the skin.

Absorption

Can pass through skin and cause symptoms similar to those resulting from swallowing or inhalation.

Ingestion

This product is not intended to be ingested or eaten under normal conditions of use. If ingested, it may cause gastrointestinal (GI) irritation, nausea, vomiting, and diarrhea. Aspiration of this material into the lungs due, for example, to vomiting, can cause chemical pneumonitis which can be harmful or fatal.

Eyes

May cause severe eye irritation and corneal damage.

Primary Routes of Entry (Exposure)

Inhalation, skin, and eye contact.

Target Organs

Upper respiratory passages, central nervous system, skin, eyes, liver, kidney.

Medical Conditions Aggravated by Exposure

Pre-existing respiratory and skin disorders; CNS, heart, liver and/or kidney disease.

Section 4 - First Aid Measures

First Aid: Inhalation

Remove to fresh air. If symptoms persist contact a physician. If the affected person is having difficulty breathing, administer oxygen or apply artificial respiration and immediately contact a medical professional.

First Aid: Skin

Wash with soap and water for 15 minutes. If irritation develops or persists, contact a physician.

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. Do not make an unconscious person vomit.

First Aid: Eyes

Flush eyes with large amounts of water for 5-20 minutes. Contact a medical professional.

Section 5 - Fire Fighting Measures

Flash Point: <0°F

Upper Flammable Limit (UFL): 12.8

Auto Ignition: Not determined

Rate of Burning: Not determined

General Fire Hazards

Extremely flammable. Vapors may ignite and/or cause flash fires. Eliminate sources of ignition. Use adequate cross-ventilation sufficient to remove odor and vapors.

Extinguishing Media

Foam, dry chemical, carbon dioxide, water spray, or fog.

Fire Fighting Equipment/Instructions

Firefighters should wear full-face, self-contained breathing apparatus and impervious protective clothing. Firefighters should avoid inhalation of any combustion products.

Method Used: TOC

Lower Flammable Limit (LFL): 1.1

Flammability Classification: IB

Section 6 - Accidental Release Measures

Containment Procedures

Eliminate all ignition sources. Dam, mop, absorb onto sawdust or other absorbent.

Clean-Up Procedures

Transfer liquids to covered metal containers for recovery or disposal, or remove with inert absorbent. Place absorbent diking materials in covered metal containers for disposal. Prevent contamination of sewers, steams, and groundwater with spilled material or used absorbent.

Section 7 - Handling and Storage

Handling Procedures

Use protective equipment as described in Section 8 of this material safety data sheet when handling uncontained material.

Remove all sources of ignition. Keep container closed when not in use. Use adequate ventilation to avoid breathing vapors when cover is removed.

Storage Procedures

Material should be kept cool and dry, and protected from the elements. Store in tightly closed containers to prevent contamination. Handle with non-sparking tools. All containers should be grounded when material is transferred.

Section 8 - Exposure Controls / Personal Protection

A: Component Exposure Limits

Toluene (108-88-3)

ACGIH: 50 ppm TWA

Skin - potential significant contribution to overall exposure by the cutaneous route

OSHA: 100 ppm TWA; 375 mg/m3 TWA

150 ppm STEL; 560 mg/m3 STEL

Acetone (67-64-1)

ACGIH: 500 ppm TWA
750 ppm STEL
OSHA: 750 ppm TWA; 1800 mg/m3 TWA
1000 ppm STEL; 2400 mg/m3 STEL (The acetone STEL does not apply to the cellulose acetate fiber industry. It is in effect for all other sectors)

Methyl ethyl ketone (78-93-3)

ACGIH: 200 ppm TWA
300 ppm STEL
OSHA: 200 ppm TWA; 590 mg/m3 TWA
300 ppm STEL; 885 mg/m3 STEL

PERSONAL PROTECTIVE EQUIPMENT

Personal Protective Equipment: Eyes/Face

Safety glasses with sideshields, chemical goggles are recommended.

Personal Protective Equipment: Skin

Solvent-resistant gloves are recommended.

Personal Protective Equipment: Respiratory

If vapor levels are above the applicable exposure limits, a NIOSH-approved organic vapor respirator must be provided and worn.

Ventilation

Local exhaust ventilation should be provided at areas of use to remove gases & vapors from work area. General dilution ventilation should be provided as necessary to keep gases & vapors below the applicable exposure limits and guidelines. 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

An apron or coveralls impervious to chemicals can be used to protect clothing. Wash exposed skin after contact, before breaks and meals, and at end of work period.

Section 9 - Physical & Chemical Properties

Appearance: Amber	Odor: Solvent odor
Physical State: liquid	pH: Not determined
Boiling Point: 56°C/133°F	Melting Point: Not determined
Freezing Point: Not determined	Specific Gravity: 0.85031
Percent Volatile: 74.8%	Evaporation Rate: Faster than n-Butyl Acetate
	VOC: 199.4 g/L (EPA Method 24)

Section 10 - Chemical Stability & Reactivity Information

Chemical Stability

This is a stable material.

Chemical Stability: Conditions to Avoid

Fire, sparks, static electricity

Incompatibility

Strong oxidizing agents, strong acids and bases.

Hazardous Decomposition

Carbon monoxide, carbon dioxide

Hazardous Polymerization

Will not occur.

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

Vapors from this product may cause irritation of the eyes, and upper respiratory tract including the nose, mouth, and throat. Inhalation of vapors may cause headache, numbness of the fingers and arms, incoordination, weakness, slowed respiration (breathing), and narcosis (drowsiness). Prolonged skin contact may produce irritation, and dermatitis and common solvent defatting effect. Eye contact may result in irritation of the eyes, and lacrimation (watering).

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

Acetone (67-64-1)

Inhalation LC50 Rat: 76 mg/L/4H; Oral LD50 Rat: 1800 mg/kg; Dermal LD50 Rabbit: 20000 mg/kg

Methyl ethyl ketone (78-93-3)

Inhalation LC50 Mouse: 32 g/m³/4H; Oral LD50 Rat: 2600 mg/kg; Dermal LD50 Rabbit: 6400 mg/kg

Carcinogenicity**A: General Product Information**

No additional information available.

B: 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])

Acetone (67-64-1)

ACGIH: A4 - Not Classifiable as a Human Carcinogen

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 [static];

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

Acetone (67-64-1)

96 Hr LC50 Oncorhynchus mykiss: 5540 mg/L [static]; 96 Hr LC50 Pimephales promelas: 6210 mg/L [flow-through]; 96 Hr

LC50 Lepomis macrochirus: 8300 mg/L [static]

15 min EC50 Photobacterium phosphoreum: 14500 mg/L

48 Hr EC50 water flea: 0.0039 mg/L; 48 Hr EC50 water flea: 12700 mg/L [Static]; 48 Hr EC50 Daphnia magna: 12600 mg/L

Methyl ethyl ketone (78-93-3)

96 Hr LC50 Pimephales promelas: 3220 mg/L [flow-through]; 96 Hr LC50 Lepomis macrochirus: 1690 mg/L

5 min EC50 Photobacterium phosphoreum: 3426 mg/L; 30 min EC50 Photobacterium phosphoreum: 3403 mg/L

48 Hr EC50 water flea: 520 mg/L; 48 Hr EC50 Daphnia magna: 5091 mg/L

Section 13 - Disposal Considerations

US EPA Waste Number & Descriptions**A: General Product Information**

Comply with state and local regulations for disposal. If you are unsure of the regulations, contact your local Public Health Department, or the local office of the EPA.

B: Component Waste Numbers**Acetone (67-64-1)**

RCRA: waste number U002 (Ignitable waste)

Disposal Instructions

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

Section 14 - Transportation Information
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International Transportation Regulations

DOT: UN1133, Adhesives, 3, PG II
FLAMMABLE LIQUID label required

IATA: UN1133, Adhesives, 3, PG II
FLAMMABLE LIQUID label required
CARGO AIRCRAFT ONLY

Inner packagings must not exceed 10 L (2.6 gal) each (depending on the type of inner packaging used) and the outer package may not exceed 60 L (15.8 gal). A UN single package is limited to 60 L (15.8 gal).

IMDG: UN1133, Adhesives, 3, PG II
FLAMMABLE LIQUID label required

Section 15 - Regulatory Information
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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).

Acetone (67-64-1)

CERCLA: 5000 lb final RQ; 2270 kg final RQ

Methyl ethyl ketone (78-93-3)

CERCLA: 5000 lb final RQ; 2270 kg final RQ

State Regulations**A: General Product Information**

Other state regulations may apply. Check individual state requirements.

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
Acetone	67-64-1	Yes	No	Yes	Yes	Yes	Yes
Methyl ethyl ketone	78-93-3	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.

Toluene **CAS# 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
Acetone	67-64-1	Yes	Yes	Yes
Methyl ethyl ketone	78-93-3	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 %
Acetone	67-64-1	1 %
Methyl ethyl ketone	78-93-3	1 %

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
02/20/06	3231-1.0000	New MSDS authoring system.

This is the end of MSDS # 3231