

JM Membrane Bonding Adhesive (TPO & EPDM)

Version 1.1

Revision Date 10/11/2016

Print Date 10/13/2016

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Trade name : JM Membrane Bonding Adhesive (TPO & EPDM) - SKU
70005181

Manufacturer or supplier's details

Company : Johns Manville
Address : P.O. Box 5108
Denver, CO USA 80127
Telephone : +1 303-978-2000 8:00AM-5:00PM M-F
Emergency telephone : 1-800-424-9300 (Chemtrec, in English)
number
Prepared by : productsafety@jm.com

SECTION 2. HAZARDS IDENTIFICATION**GHS Classification**

Flammable liquids : Category 2
Skin irritation : Category 2
Eye irritation : Category 2A
Reproductive toxicity : Category 2
Specific target organ toxicity : Category 3 (Central nervous system)
- single exposure
Specific target organ toxicity : Category 2
- repeated exposure
Aspiration hazard : Category 1

GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : H225 Highly flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
H361 Suspected of damaging fertility or the unborn child.
H373 May cause damage to organs through prolonged or repeated exposure.

JM Membrane Bonding Adhesive (TPO & EPDM)

Version 1.1

Revision Date 10/11/2016

Print Date 10/13/2016

Precautionary statements

:

Prevention:

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P331 Do NOT induce vomiting.
P332 + P313 If skin irritation occurs: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P362 Take off contaminated clothing and wash before reuse.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P403 + P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

JM Membrane Bonding Adhesive (TPO & EPDM)

Version 1.1

Revision Date 10/11/2016

Print Date 10/13/2016

Hazardous components

Chemical name	CAS-No.	Concentration (%)
toluene	108-88-3	>= 30 - < 50
n-hexane	110-54-3	>= 20 - < 30
acetone	67-64-1	>= 10 - < 20

SECTION 4. FIRST AID MEASURES

- General advice : Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.
Symptoms of poisoning may appear several hours later.
Do not leave the victim unattended.
- If inhaled : Consult a physician after significant exposure.
If unconscious place in recovery position and seek medical advice.
- In case of skin contact : If skin irritation persists, call a physician.
Wash off with soap and water.
If on clothes, remove clothes.
- In case of eye contact : Remove contact lenses.
Immediately flush eye(s) with plenty of water.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.
- If swallowed : Keep respiratory tract clear.
Do NOT induce vomiting.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
Take victim immediately to hospital.
- Most important symptoms and effects, both acute and delayed : irritant effects

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Alcohol-resistant foam
Carbon dioxide (CO₂)
Dry chemical
Halons
- Unsuitable extinguishing media : High volume water jet
- Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.
- Hazardous combustion products : Carbon oxides
- Further information : Standard procedure for chemical fires.

JM Membrane Bonding Adhesive (TPO & EPDM)

Version 1.1

Revision Date 10/11/2016

Print Date 10/13/2016

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
For safety reasons in case of fire, cans should be stored separately in closed containments.
Use a water spray to cool fully closed containers.

Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Ensure adequate ventilation.
Remove all sources of ignition.
Evacuate personnel to safe areas.
Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
- Environmental precautions : Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.
- Methods and materials for containment and cleaning up : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

SECTION 7. HANDLING AND STORAGE

- Advice on protection against fire and explosion : Do not spray on a naked flame or any incandescent material.
Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). Use only explosion-proof equipment. Keep away from open flames, hot surfaces and sources of ignition.
- Advice on safe handling : Avoid formation of aerosol.
Do not breathe vapours/dust.
Avoid exposure - obtain special instructions before use.
Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Take precautionary measures against static discharges.
Provide sufficient air exchange and/or exhaust in work rooms.
Open drum carefully as content may be under pressure.
Dispose of rinse water in accordance with local and national regulations.
- Conditions for safe storage : No smoking.
Keep container tightly closed in a dry and well-ventilated place.

JM Membrane Bonding Adhesive (TPO & EPDM)

Version 1.1

Revision Date 10/11/2016

Print Date 10/13/2016

Containers which are opened must be carefully resealed and kept upright to prevent leakage.
 Observe label precautions.
 Electrical installations / working materials must comply with the technological safety standards.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
toluene	108-88-3	TWA	20 ppm	ACGIH
		TWA	100 ppm 375 mg/m ³	NIOSH REL
		ST	150 ppm 560 mg/m ³	NIOSH REL
		TWA	200 ppm	OSHA
		CEIL	300 ppm	OSHA
		Peak	500 ppm (10 minutes)	OSHA
		TWA	100 ppm 375 mg/m ³	OSHA
n-hexane	110-54-3	STEL	150 ppm 560 mg/m ³	OSHA
		TWA	50 ppm	ACGIH
		TWA	50 ppm 180 mg/m ³	NIOSH REL
		TWA	500 ppm 1,800 mg/m ³	OSHA
acetone	67-64-1	TWA	50 ppm 180 mg/m ³	OSHA
		TWA	250 ppm	ACGIH
		STEL	500 ppm	ACGIH
		TWA	250 ppm 590 mg/m ³	NIOSH REL
		TWA	1,000 ppm 2,400 mg/m ³	OSHA
		TWA	750 ppm 1,800 mg/m ³	OSHA
		STEL	1,000 ppm 2,400 mg/m ³	OSHA

Personal protective equipment

Respiratory protection : In the case of vapour formation use a respirator with an approved filter.

Hand protection

Remarks : Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).

JM Membrane Bonding Adhesive (TPO & EPDM)

Version 1.1

Revision Date 10/11/2016

Print Date 10/13/2016

Eye protection	:	Tightly fitting safety goggles Wear face-shield and protective suit for abnormal processing problems.
Skin and body protection	:	Impervious clothing Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Hygiene measures	:	Handle in accordance with good industrial hygiene and safety practice. When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday. Written instructions for handling must be available at the work place.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid
Colour	:	yellow
Odour	:	aromatic
Odour Threshold	:	No data available
pH	:	No data available
Melting point/range	:	No data available
Boiling point/boiling range	:	> 35 °C
Flash point	:	-18 °C
Evaporation rate	:	No data available
Flammability (solid, gas)	:	No data available
Upper explosion limit	:	No data available
Lower explosion limit	:	No data available
Vapour pressure	:	No data available
Relative vapour density	:	No data available
Relative density	:	No data available
Density	:	0.86 g/cm ³
Solubility(ies)	:	
Water solubility	:	No data available
Solubility in other solvents	:	No data available

JM Membrane Bonding Adhesive (TPO & EPDM)

Version 1.1

Revision Date 10/11/2016

Print Date 10/13/2016

Partition coefficient: n-octanol/water	:	No data available
Auto-ignition temperature	:	No data available
Thermal decomposition	:	No data available
Viscosity	:	
Viscosity, dynamic	:	900 - 4,000 mPa.s
Viscosity, kinematic	:	No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	Stable	No decomposition if stored and applied as directed.
Chemical stability	:	Stable under normal conditions.	No decomposition if stored and applied as directed.
Possibility of hazardous reactions	:	None known.	No decomposition if stored and applied as directed. Vapours may form explosive mixture with air.
Conditions to avoid	:	Heat, flames and sparks.	
Incompatible materials	:	Strong oxidizing agents	
Hazardous decomposition products	:	Carbon dioxide (CO ₂) Carbon monoxide	

SECTION 11. TOXICOLOGICAL INFORMATION**Acute toxicity****Product:**

Acute dermal toxicity : Acute toxicity estimate : 4,400 mg/kg
Method: Calculation method

Acute toxicity**Components:****toluene:**

Acute oral toxicity : LD50 Oral (Rat): 5,580 mg/kg

Acute inhalation toxicity : LC50 (Rat): 28.1 mg/l
Exposure time: 4 h
Test atmosphere: vapour

Acute dermal toxicity : LD50 (Rabbit, male): > 5,000 mg/kg

JM Membrane Bonding Adhesive (TPO & EPDM)

Version 1.1

Revision Date 10/11/2016

Print Date 10/13/2016

Acute toxicity**n-hexane:**

Acute oral toxicity : LD50 (Rat): 25,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): 48000 ppm
Exposure time: 4 h

Acute dermal toxicity : LD50 (Rabbit): > 1,300 mg/kg

Acute toxicity**acetone:**

Acute oral toxicity : LD50 (Rat, female): 5,800 mg/kg

Acute inhalation toxicity : LC50 (Rat): 120 mg/l
Exposure time: 4 h
Test atmosphere: vapour

Acute dermal toxicity : LD50 (Rabbit): 20,000 mg/kg

Skin corrosion/irritation**Components:****toluene:**Species: Rabbit
Assessment: Irritating to skin.
Result: Irritating to skin.**Skin corrosion/irritation****n-hexane:**

Result: Skin irritation

Serious eye damage/eye irritation**Components:****toluene:**Species: Rabbit
Result: Mild eye irritation
Exposure time: 24 h**Serious eye damage/eye irritation****acetone:**Species: Rabbit
Result: Eye irritation
Exposure time: 24 h
Assessment: Irritating to eyes.
Method: Draize Test**Reproductive toxicity****Components:****toluene:**

Reproductive toxicity - Assessment : Suspected of damaging the unborn child., Some evidence of adverse effects on development, based on animal

JM Membrane Bonding Adhesive (TPO & EPDM)

Version 1.1

Revision Date 10/11/2016

Print Date 10/13/2016

experiments.

Reproductive toxicity**n-hexane:**

Reproductive toxicity - Assessment : Suspected of damaging fertility.

STOT - single exposure**Components:****toluene:**

Assessment: May cause drowsiness or dizziness.

STOT - single exposure**n-hexane:**

Assessment: May cause drowsiness or dizziness.

STOT - single exposure**acetone:**

Exposure routes: inhalation (vapour)

Target Organs: Nervous system

Assessment: May cause drowsiness or dizziness.

STOT - repeated exposure**Components:****toluene:**

Assessment: May cause damage to organs through prolonged or repeated exposure.

STOT - repeated exposure**n-hexane:**

Assessment: May cause damage to organs through prolonged or repeated exposure.

Aspiration toxicity**Components:****toluene:**

May be fatal if swallowed and enters airways.

n-hexane:

May be fatal if swallowed and enters airways.

Experience with human exposure**Components:****toluene:**

Skin contact:

Remarks:

Prolonged skin contact may defat the skin and produce dermatitis.

n-hexane:

JM Membrane Bonding Adhesive (TPO & EPDM)

Version 1.1

Revision Date 10/11/2016

Print Date 10/13/2016

Repeated or prolonged exposure may cause irritation of eyes and skin.

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity**

No data available

Persistence and degradability

No data available

Bioaccumulative potential**Components:****toluene:**Partition coefficient: n-
octanol/water : Pow: 2.7**acetone:**Partition coefficient: n-
octanol/water : log Pow: 0.24**Mobility in soil**

No data available

Other adverse effects**Product:**Ozone-Depletion Potential : Regulation: 40 CFR Protection of Environment; Part 82
Protection of Stratospheric Ozone - CAA Section 602 Class I
Substances
Remarks: This product neither contains, nor was
manufactured with a Class I or Class II ODS as defined by the
U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A +
B).Additional ecological
information : No data available**SECTION 13. DISPOSAL CONSIDERATIONS****Disposal methods**Disposal of residual product : Do not dispose of waste into sewer.
Do not contaminate ponds, waterways or ditches with
chemical or used container.
Send to a licensed waste management company.Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.
Do not burn, or use a cutting torch on, the empty drum.

JM Membrane Bonding Adhesive (TPO & EPDM)

Version 1.1

Revision Date 10/11/2016

Print Date 10/13/2016

SECTION 14. TRANSPORT INFORMATION

International transport regulations

US DOT: UN1133, Adhesives, 3, II

SECTION 15. REGULATORY INFORMATION

TSCA list

TSCA - 5(a) Significant New Use Rule List of Chemicals : No substances are subject to a Significant New Use Rule.

US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D) : No substances are subject to TSCA 12(b) export notification requirements.

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
toluene	108-88-3	1000	

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 : The following components are subject to reporting levels established by SARA Title III, Section 313:

toluene	108-88-3	50 %
n-hexane	110-54-3	30 %

Clean Air Act

The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 12 (40 CFR 61):

toluene	108-88-3	50 %
n-hexane	110-54-3	30 %

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489):

toluene	108-88-3	50 %
acetone	67-64-1	20 %

California Prop 65

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

toluene	108-88-3
---------	----------

JM Membrane Bonding Adhesive (TPO & EPDM)

Version 1.1

Revision Date 10/11/2016

Print Date 10/13/2016

The components of this product are reported in the following inventories:

DSL : All components of this product are on the Canadian DSL

TSCA : On the inventory, or in compliance with the inventory

SECTION 16. OTHER INFORMATION**Further information**

Revision Date : 10/11/2016

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.