

JM TPO 1168 Membrane Adhesive

Version 2.1

Revision Date 07/26/2019

Print Date 07/26/2019

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Trade name : JM TPO 1168 Membrane Adhesive

Manufacturer or supplier's details

Company : Johns Manville
Address : P.O. Box 5108
Denver, CO USA 80127
Telephone : +1-303-978-2000
Emergency telephone : +1-800-424-9300 (CHEMTREC)
number

Company : Johns Manville Canada Inc.
Address : 5301 42 Avenue
Innisfail, AB Canada T4G 1A2
Telephone : +1-303-978-2000
Emergency telephone : +1-800-424-9300 (CHEMTREC)
number

Recommended use of the chemical and restrictions on use

Restrictions on use : For professional users only.

Prepared by : productsafety@jm.com

SECTION 2. HAZARDS IDENTIFICATION**GHS classification in accordance with 29 CFR 1910.1200 (OSHA HCS 2012) and the Hazardous Products Regulations (WHMIS 2015)**

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

GHS label elementsHazard pictograms : 

Signal word : Danger

Hazard statements : H225 Highly flammable liquid and vapour.
H315 Causes skin irritation.

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H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
H373 May cause damage to organs through prolonged or repeated exposure.
H361 Suspected of damaging fertility or the unborn child.

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:

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.
P312 Call a POISON CENTER or doctor/ physician if you feel unwell.
P332 + P313 If skin irritation occurs: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P362 + P364 Take off contaminated clothing and wash it 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 facility in accordance with local, regional, national and international regulations.

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Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**Hazardous components**

Chemical name	CAS-No.	Concentration (%)
benzene, 1-chloro-4-(trifluoromethyl)-	98-56-6	≥ 60 - ≤ 80
toluene	108-88-3	≥ 1 - ≤ 10
methyl acetate	79-20-9	≥ 1 - ≤ 10

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 : If breathed in, move person into fresh air.
If not breathing, give artificial respiration.
Call a physician or poison control centre immediately.
- In case of skin contact : Take off all contaminated clothing immediately.
Wash off immediately with soap and plenty of water.
If symptoms persist, call a physician.
- In case of eye contact : Flush eyes with water at least 15 minutes. Get medical attention if eye irritation develops or persists.
If easy to do, remove contact lens, if worn.
Protect unharmed eye.
- If swallowed : If swallowed, call a poison control centre or doctor immediately.
Do NOT induce vomiting.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
- Most important symptoms and effects, both acute and delayed : None known.

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Dry chemical
Carbon dioxide (CO₂)
Halons
Water spray
Foam
- Unsuitable extinguishing media : High volume water jet

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- | | | |
|---|---|---|
| Specific hazards during firefighting | : | Do not allow run-off from fire fighting to enter drains or water courses. |
| Hazardous combustion products | : | carbon oxides
chlorine compounds
fluorine compounds |
| Further information | : | Standard procedure for chemical fires.
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 | : | Keep people away from and upwind of spill/leak.
Remove all sources of ignition.
Ventilate the area.
Use personal protective equipment. |
| 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, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a 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. |

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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.
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.
- Materials to avoid : Oxidizing agents
- Further information on storage stability : Stable at normal ambient temperature and pressure.

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/m3	NIOSH REL
		ST	150 ppm 560 mg/m3	NIOSH REL
		TWA	200 ppm	OSHA
		CEIL	300 ppm	OSHA
		Peak	500 ppm (10 minutes)	OSHA
methyl acetate	79-20-9	TWA	200 ppm	ACGIH
		STEL	250 ppm	ACGIH
		TWA	200 ppm 610 mg/m3	NIOSH REL
		ST	250 ppm 760 mg/m3	NIOSH REL
		TWA	200 ppm 610 mg/m3	OSHA

Personal protective equipment

- Respiratory protection : General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other

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circumstance where air purifying respirators may not provide adequate protection.

Hand protection

Material

: Impervious gloves

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).

Eye protection

: Wear safety glasses with side shields or goggles.

Skin and body protection

: Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific 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

Color

: yellow

Odor

: characteristic

Odor Threshold

: No data available

pH

: No data available

Melting point/range

: No data available

Boiling point/boiling range

: > 35 °C

Flash point

: -10 °C

Evaporation rate

: No data available

Flammability (solid, gas)

: No data available

Upper explosion limit

: Not applicable

Lower explosion limit

: Not applicable

Vapour pressure

: No data available

Relative vapour density

: No data available

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Relative density	: No data available
Density	: 1.24 g/cm ³
Solubility(ies)	
Water solubility	: insoluble
Solubility in other solvents	: No data available
Partition coefficient: n-octanol/water	: No data available
Auto-ignition temperature	: No data available
Thermal decomposition	: No data available
Viscosity	
Viscosity, dynamic	: 2,000 - 5,000 mPa.s
Viscosity, kinematic	: No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: Not classified as a reactivity hazard.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: No decomposition if stored and applied as directed.
Conditions to avoid	: Heat, flames and sparks.
Incompatible materials	: Oxidizing agents
Hazardous decomposition products	: Carbon monoxide Carbon dioxide (CO ₂) chlorine compounds fluorine compounds

SECTION 11. TOXICOLOGICAL INFORMATION**Acute toxicity****Components:****benzene, 1-chloro-4-(trifluoromethyl)-:**

Acute oral toxicity	: LD ₅₀ (Rat, male): 5,546 mg/kg GLP: no
Acute inhalation toxicity	: LC ₅₀ (Rat, male and female): > 32.03 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: OECD Test Guideline 403

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GLP: yes

Acute dermal toxicity : LD50 (Rabbit): > 3,300 mg/kg
GLP: no

Acute toxicity**toluene:**

Acute oral toxicity : LD50 Oral (Rat, male): 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): > 12,267 mg/kg

Acute toxicity**methyl acetate:**

Acute oral toxicity : LD50 (Rat, male): 6,482 mg/kg
Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rabbit, male and female): ca. > 49.2 - < 98.4 mg/l
Exposure time: 4 h
Test atmosphere: vapour

Acute dermal toxicity : LD50 (Rat, male and female): > 2,000 mg/kg
Method: OECD Test Guideline 402

Skin corrosion/irritation**Components:****toluene:**

Species: Rabbit
Result: Irritating to skin.

Serious eye damage/eye irritation**Components:****methyl acetate:**

Species: Rabbit
Result: Irritating to eyes.
Method: OECD Test Guideline 405

Respiratory or skin sensitisation**Components:****benzene, 1-chloro-4-(trifluoromethyl)-:**

Test Type: local lymph node assay (LLNA)
Exposure routes: Skin contact
Species: Mouse
Method: OECD Test Guideline 429
Result: The product is a skin sensitizer, sub-category 1B.

IARC

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed

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human carcinogen by IARC.

ACGIH

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

OSHA

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity**Components:****toluene:**

Reproductive toxicity -
Assessment

: Suspected of damaging the unborn child., Some evidence of adverse effects on development, based on animal experiments.

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

Assessment: May cause drowsiness or dizziness.

STOT - single exposure**methyl acetate:**

Exposure routes: Inhalation

Target Organs: Central nervous system

Assessment: May cause drowsiness or dizziness.

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

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

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

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.

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Further information**Product:**

Remarks: Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Concentrations substantially above the TLV value may cause narcotic effects. Solvents may degrease the skin.

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Components:****benzene, 1-chloro-4-(trifluoromethyl)-:**

Toxicity to fish : LC50 (Danio rerio (zebra fish)): 3 mg/l
Exposure time: 96 h
Test Type: semi-static test
Method: OECD Test Guideline 203

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 2 mg/l
aquatic invertebrates Exposure time: 48 h
Method: OECD Test Guideline 202

Toxicity to algae : NOEC (Pseudokirchneriella subcapitata (green algae)): 0.41
mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

Ecotoxicology Assessment

Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.

Persistence and degradability**Components:****benzene, 1-chloro-4-(trifluoromethyl)-:**

Biodegradability : Result: According to the results of tests of biodegradability this product is not readily biodegradable.
Method: OECD Test Guideline 301D

methyl acetate:

Biodegradability : Result: Readily biodegradable.

Bioaccumulative potential**Components:****benzene, 1-chloro-4-(trifluoromethyl)-:**

Bioaccumulation : Bioconcentration factor (BCF): 121.8

Partition coefficient: n- : Pow: 5,030 (25 °C)

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octanol/water

log Pow: 3.7 (25 °C)

toluene:Partition coefficient: n-
octanol/water : Pow: 2.7**methyl acetate:**Partition coefficient: n-
octanol/water : log Pow: 0.18**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 : Harmful to aquatic life with long lasting effects.

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.
Dispose of contents/container to an approved facility in
accordance with local, regional, national and international
regulations.

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.

SECTION 14. TRANSPORT INFORMATION**International transport regulations**

Land transport

USDOT (Special Provision 383): UN1133, Adhesives, 3, III

TDG: UN1133, Adhesives, 3, II

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LIMITED QUANTITY if shipped in inner packagings not over 5.0 L (1.3 gallons) net capacity each, packed in a strong outer packaging.

Sea transport

IMDG: UN1133, Adhesives, 3, II

Air transport

IATA/ICAO: 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.

U.S. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpart D) : The following substance(s) is/are subject to TSCA 12(b) export notification requirements:
benzene, 1-chloro-4-(trifluoromethyl)-

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	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

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

SARA 311/312 Hazards : Flammable (gases, aerosols, liquids, or solids)
Skin corrosion or irritation
Serious eye damage or eye irritation
Reproductive toxicity
Specific target organ toxicity (single or repeated exposure)

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

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 1 - 10 %

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).

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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	1 - 10 %
methyl acetate	79-20-9	1 - 10 %

California Safe Drinking Water and Toxic Enforcement Act (Proposition 65)

 **WARNING:** This product can expose you to chemicals including benzene, 1-chloro-4-(trifluoromethyl)-, which is/are known to the State of California to cause cancer, and toluene, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

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

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

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

SECTION 16. OTHER INFORMATION**Further information**

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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.