SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Trade name : JM Single Ply Primer (Low VOC)

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

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

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

Precautionary statements:

**Prevention:**
- P201 + P202 Obtain special instructions before use. 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.
- P235 Store in a well-ventilated place. Keep cool.
- 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.
- P302 + P352 IF ON SKIN: Wash with plenty of water.
- P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P312 Call a POISON CENTER or doctor/ physician 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 for extinction.

**Storage:**
- P403 + P235 Store in a well-ventilated place. Keep cool.
- P233 Keep container tightly closed.
- P405 Store locked up.
Disposal:
P501 Dispose of contents/container to an approved facility in accordance with local, regional, national and international regulations.

Other hazards
None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>Concentration (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>benzene, 1-chloro-4-(trifluoromethyl)-</td>
<td>98-56-6</td>
<td>&gt;= 45 - &lt;= 100</td>
</tr>
<tr>
<td>toluene</td>
<td>108-88-3</td>
<td>&gt;= 10 - &lt;= 30</td>
</tr>
<tr>
<td>crystalline silica</td>
<td>14808-60-7</td>
<td>&gt;= 0.1 - &lt;= 1</td>
</tr>
</tbody>
</table>

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 : Remove person to fresh air. If signs/symptoms continue, get medical attention. If unconscious, place in recovery position and seek medical advice.

In case of skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash contaminated clothing before re-use. If skin irritation persists, call a physician.

In case of eye contact : In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Keep eye wide open while rinsing. Remove contact lenses. Protect unharmed eye. If eye irritation persists, consult a specialist.

If swallowed : Do NOT induce vomiting. Keep respiratory tract clear. 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 : Carbon dioxide (CO2)
Dry chemical
Foam
Dry sand

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 : Hazardous decomposition products due to incomplete combustion
carbon oxides
chlorine compounds
fluorine compounds

Specific extinguishing methods : Standard procedure for chemical fires.

Further information : 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: 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. 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.

Further information on storage stability: Stable at normal ambient temperature and pressure.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters / Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>toluene</td>
<td>108-88-3</td>
<td>TWA</td>
<td>20 ppm</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>100 ppm, 375 mg/m3</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ST</td>
<td>150 ppm, 560 mg/m3</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>200 ppm</td>
<td>OSHA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CEIL</td>
<td>300 ppm</td>
<td>OSHA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Peak</td>
<td>500 ppm (10 minutes)</td>
<td>OSHA</td>
</tr>
<tr>
<td>crystalline silica</td>
<td>14808-60-7</td>
<td>TWA (Respirable fraction)</td>
<td>0.025 mg/m3</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (respirable)</td>
<td>10 mg/m3 (respirable) / %SiO2+2</td>
<td>OSHA</td>
</tr>
</tbody>
</table>
SAFETY DATA SHEET
200000000617

JM Single Ply Membrane Primer (Low VOC)

Version 3.1  Revision Date 07/26/2019  Print Date 07/26/2019

<table>
<thead>
<tr>
<th></th>
<th>TWA (respirable)</th>
<th>250 mppcf / %SiO2+5</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>TWA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Respirable dust)</td>
<td>0.05 mg/m3</td>
<td>NIOSH REL</td>
<td></td>
</tr>
<tr>
<td>TWA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Respirable dust)</td>
<td>0.05 mg/m3</td>
<td>OSHA</td>
<td></td>
</tr>
</tbody>
</table>

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 circumstance where air purifying respirators may not provide adequate protection.

Hand protection

Material: Solvent-resistant 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: Tightly fitting safety goggles
Safety glasses with side-shields
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
Color: colourless
Odor: characteristic
### Odor Threshold
- No data available

### pH
- No data available

### Melting point/range
- Not determined

### Boiling point/boiling range
- 111 °C

### Flash point
- 7.2 °C

### Evaporation rate
- No data available

### Flammability (solid, gas)
- No data available

### Upper explosion limit
- 7.0 % (V)

### Lower explosion limit
- 1.2 % (V)

### Vapour pressure
- 29 hPa (20 °C)

### Relative vapour density
- Vapors are heavier than air and may travel along the floor and in the bottom of containers.

### Relative density
- No data available

### Density
- 1.2 g/cm³ (20 °C)

### 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, dynamic
- No data available

### Viscosity, kinematic
- No data available

### SECTION 10. STABILITY AND REACTIVITY

#### Reactivity
- No dangerous reaction known under conditions of normal use.

#### Chemical stability
- Stable under normal conditions.

#### Possibility of hazardous reactions
- 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: In case of fire hazardous decomposition products may be produced such as:
carbon oxides
nitrogen oxides

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:
Acute dermal toxicity: Acute toxicity estimate: > 2,000 mg/kg
Method: Calculation method

Components: benzene, 1-chloro-4-(trifluoromethyl):
Acute oral toxicity: LD50 (Rat, male): 5,546 mg/kg
GLP: no

Acute inhalation toxicity: LC50 (Rat, male and female): > 32.03 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
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 crystalline silica:
Acute oral toxicity: LD50 (Rat): > 22,500 mg/kg

Acute inhalation toxicity: Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity: Assessment: The substance or mixture has no acute dermal toxicity
Skin corrosion/irritation

Components:
toluene:
Species: Rabbit
Result: Irritating to skin.

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 sensitiser, sub-category 1B.

IARC
Group 1: Carcinogenic to humans
crystalline silica 14808-60-7

ACGIH
Suspected human carcinogen
crystalline silica 14808-60-7

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
Known to be human carcinogen
crystalline silica 14808-60-7

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 - 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.

Further information

**Product:**
Remarks: 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 aquatic invertebrates: EC50 (Daphnia magna (Water flea)): 2 mg/l
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.

crystalline silica:

Toxicity to fish: LC50 (Cyprinus carpio (Carp)): > 10,000 mg/l
Exposure time: 72 h
Persistence and degradability

**Components:**

*benezene, 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

Bioaccumulative potential

**Components:**

*benezene, 1-chloro-4-(trifluoromethyl):*

Bioaccumulation: Bioconcentration factor (BCF): 121.8

Partition coefficient: n-octanol/water: Pow: 5,030 (25 °C) log Pow: 3.7 (25 °C)

toluene:

Partition coefficient: n-octanol/water: Pow: 2.7

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.
SECTION 14. TRANSPORT INFORMATION

International transport regulations

Land transport
USDOT: UN1133, Adhesives, 3, II
TDG: UN1133, Adhesives, 3, II

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

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

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Component RQ (lbs)</th>
<th>Calculated product RQ (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>toluene</td>
<td>108-88-3</td>
<td>1000</td>
<td>3333</td>
</tr>
</tbody>
</table>

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)
Aspiration hazard

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 10 - 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 SOCMI Intermediate or Final VOC's (40 CFR 60.489):

- toluene 108-88-3 10 - 30 %

**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

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**SECTION 16. OTHER INFORMATION**

**Further information**

**Revision Date** : 07/26/2019

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.