SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Trade name : JM PVC Membrane Adhesive (Water Based)

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

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification
Flammable liquids : Category 4
Acute toxicity (Oral) : Category 3
Acute toxicity (Dermal) : Category 3
Acute toxicity (Inhalation) : Category 3
Skin irritation : Category 2
Eye irritation : Category 2A
Reproductive toxicity : Category 2
Specific target organ toxicity - single exposure : Category 1
Specific target organ toxicity - repeated exposure : Category 2
Aspiration hazard : Category 1

GHS label elements
Hazard pictograms :
->

Signal word : Danger
Hazard statements : H227 Combustible liquid.
H304 May be fatal if swallowed and enters airways.
H301 Toxic if swallowed.
H311 Toxic in contact with skin.
H331 Toxic if inhaled.
SAFETY DATA SHEET

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H315 Causes skin irritation.
H319 Causes serious eye irritation.
H361d Suspected of damaging the unborn child.
H370 Causes damage to organs.
H373 May cause damage to organs through prolonged or repeated exposure.

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.
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P330 Rinse mouth.
P331 Do NOT induce vomiting.
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P307 + P311 IF exposed: Call a POISON CENTER or doctor/physician.
P332 + P313 If skin irritation occurs: Get medical advice/attention.
P337 + P313 If eye irritation persists: Get medical advice/attention.
P361 + P364 Take off immediately all contaminated clothing and wash it before reuse.

Storage:
P233 Keep container tightly closed.
P235 Keep cool.
P403 Store in a well-ventilated place.
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

Hazardous components

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>Concentration (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>toluene</td>
<td>108-88-3</td>
<td>&gt;= 3 - &lt;= 10</td>
</tr>
<tr>
<td>methanol</td>
<td>67-56-1</td>
<td>&gt;= 1 - &lt;= 5</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 to fresh air immediately. Get medical attention immediately.
- If breathing is irregular or stopped, administer artificial respiration.

In case of skin 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. Get medical attention immediately if irritation persists.

In case of eye contact
- In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Protect unharmed eye. If eye irritation persists, consult a specialist.

If swallowed
- Do NOT induce vomiting.
- Gently wipe or rinse the inside of the mouth with water. Never give anything by mouth to an unconscious person. Obtain medical attention.

Most important symptoms and effects, both acute and delayed
- None known.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media
- Water spray
- Carbon dioxide (CO2)
- Dry chemical
- Foam

Unsuitable extinguishing media
- High volume water jet

Hazardous combustion products
- Carbon oxides
SAFETY DATA SHEET
200000000182

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Further information : Standard procedure for chemical fires. 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 : Immediately evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Use personal protective equipment. Ensure adequate ventilation.

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). Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion : 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. Provide sufficient air exchange and/or exhaust in work rooms. Dispose of rinse water in accordance with local and national regulations.

Conditions for safe storage : No smoking. Keep in a well-ventilated place. 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
JM PVC Membrane Adhesive (Water Based)

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<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</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>375 mg/m3</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ST</td>
<td>150 ppm</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>560 mg/m3</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CEIL</td>
<td>200 ppm</td>
<td>OSHA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Peak</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>methanol</td>
<td>67-56-1</td>
<td>TWA</td>
<td>200 ppm</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL</td>
<td>250 ppm</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>200 ppm</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>260 mg/m3</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ST</td>
<td>250 ppm</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>325 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>TWA</td>
<td>260 mg/m3</td>
<td>OSHA</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

**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.
### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>liquid</td>
</tr>
<tr>
<td>Colour</td>
<td>white</td>
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<tr>
<td>Odour</td>
<td>No data available</td>
</tr>
<tr>
<td>Odour Threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>not determined</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>&gt; 100 °C</td>
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<tr>
<td>Flash point</td>
<td>91.1 °C (Method: closed cup)</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>&gt; 1</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Upper explosion limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>No data available</td>
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<tr>
<td>Vapour pressure</td>
<td>No data available</td>
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<tr>
<td>Relative vapour density</td>
<td>No data available</td>
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<tr>
<td>Relative density</td>
<td>1.078 (Water = 1.0)</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td>soluble</td>
</tr>
<tr>
<td>Water solubility</td>
<td>sterile</td>
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<tr>
<td>Solubility in other solvents</td>
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</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Thermal decomposition</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
</tbody>
</table>
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: Vapours may form explosive mixture with air.

Conditions to avoid: Heat, flames and sparks.

Incompatible materials: Oxidizing agents

Hazardous decomposition products: Carbon oxides

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Components:

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
methanol:
Acute oral toxicity: LDLo (Humans): 143 mg/kg
LD50 (Rat): 1,187 - 2,769 mg/kg

Acute inhalation toxicity: LC50 (Rat): 128.2 mg/l
Exposure time: 4 h

LC50 (Rat): 87.6 mg/l
Exposure time: 6 h

Acute dermal toxicity: LD50 (Rabbit): 17,100 mg/kg

Skin corrosion/irritation

Components:

toluene:
Species: Rabbit
Result: Irritating to skin.

Skin corrosion/irritation
methanol:
Species: Rabbit
Result: No skin irritation

**Serious eye damage/eye irritation**

**Components:**

- **toluene:**
  - Species: Rabbit
  - Result: Mild eye irritation
  - Exposure time: 24 h

**Serious eye damage/eye irritation**

- **methanol:**
  - Species: Rabbit
  - Result: No eye irritation

Respiratory sensitisation: Not classified based on available information.

**Respiratory or skin sensitisation**

**Components:**

- **methanol:**
  - Test Type: Maximisation Test
  - Exposure routes: Dermal
  - Species: Guinea pig
  - Method: OECD Test Guideline 406
  - Result: Does not cause skin sensitisation.

- **IARC**
  - No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

- **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
methanol:
Assessment: Causes damage to organs.

STOT - repeated exposure
Components:
toluene:
Assessment: May cause damage to organs through prolonged or repeated exposure.

Aspiration toxicity
May be fatal if swallowed and enters airways.
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
No data available

Persistence and degradability
No data available

Bioaccumulative potential
Components:
toluene:
Partition coefficient: n-octanol/water : Pow: 2.7

methanol:
Partition coefficient: n-octanol/water : log Pow: -0.77
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.
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
US DOT (Shipped by Ground):

Containers less than or equal to 119 gallons (450 L):
Not Regulated by DOT

Containers larger than 119 gallons (450 L):
DOT Shipping Name: NA1993, Combustible liquid, n.o.s. (toluene, methanol), III

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**

<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>100</td>
</tr>
<tr>
<td>toluene</td>
<td>108-88-3</td>
<td>100</td>
<td>*</td>
</tr>
</tbody>
</table>

*: 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**

: Acute Health Hazard

: Chronic Health Hazard

**SARA 302**

: This material does not contain any components with a section 302 EHS TPQ.

**SARA 313**

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

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>toluene</td>
<td>108-88-3</td>
</tr>
<tr>
<td>methanol</td>
<td>67-56-1</td>
</tr>
</tbody>
</table>

**Clean Air Act**

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

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>toluene</td>
<td>108-88-3</td>
</tr>
<tr>
<td>methanol</td>
<td>67-56-1</td>
</tr>
</tbody>
</table>

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):

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
</tr>
</thead>
<tbody>
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<tr>
<td>methanol</td>
<td>67-56-1</td>
</tr>
</tbody>
</table>

**US. Massachusetts Commonwealth’s Right-to-Know Law (Appendix A to 105 Code of Massachusetts Regulations Section 670.000)**

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>toluene</td>
<td>108-88-3</td>
</tr>
<tr>
<td>methanol</td>
<td>67-56-1</td>
</tr>
</tbody>
</table>

**US. Pennsylvania Worker and Community Right-to-Know Law (34 Pa. Code Chap. 301-323)**

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>water</td>
<td>7732-18-5</td>
</tr>
<tr>
<td>toluene</td>
<td>108-88-3</td>
</tr>
<tr>
<td>methanol</td>
<td>67-56-1</td>
</tr>
</tbody>
</table>

**US. New Jersey Worker and Community Right-to-Know Act (New Jersey Statute Annotated Section 34:5A-5)**

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>water</td>
<td>7732-18-5</td>
</tr>
<tr>
<td>toluene</td>
<td>108-88-3</td>
</tr>
</tbody>
</table>
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methanol 67-56-1

toluene 108-88-3

US. California Safe Drinking Water & Toxic Enforcement Act (Proposition 65)
WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

The components of this product are reported in the following inventories:
DSL : All components of this product are on the Canadian DSL
TSCA : On TSCA Inventory

SECTION 16. OTHER INFORMATION

Further information
Revision Date : 08/21/2017

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.