SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Trade name : MBR® Cold Application Adhesive

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)

Recommended use of the chemical and restrictions on use
Recommended use : Adhesives and/or sealants
Prepared by : productsafety@jm.com

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification
Flammable liquids : Category 3
Acute toxicity (Inhalation) : Category 4
Skin corrosion/irritation : Category 2
Eye irritation : Category 2B
Specific target organ toxicity - single exposure : Category 3 (Central nervous system)
Specific target organ toxicity - repeated exposure : Category 2

GHS label elements
Hazard pictograms :

Signal word : Warning
Hazard statements : H226 Flammable liquid and vapour.
                  H332 Harmful if inhaled.
                  H315 Causes skin irritation.
                  H320 Causes eye irritation.
                  H336 May cause drowsiness or dizziness.
                  H373 May cause damage to organs through prolonged or repeated exposure if inhaled.

Precautionary statements : Prevention:
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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/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 victim to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P312 Call a POISON CENTER or doctor/physician if you feel unwell.
P337 + P313 If eye irritation persists: Get medical advice/attention.
P332 + P313 If skin irritation occurs: Get medical advice/attention.
P362 Take off contaminated clothing and wash before reuse.

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>Hazardous components</th>
<th>CAS-No.</th>
<th>Concentration (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>asphalt</td>
<td>8052-42-4</td>
<td>&gt;= 40 - &lt;= 60</td>
</tr>
<tr>
<td>Stoddard solvent</td>
<td>8052-41-3</td>
<td>&gt;= 5 - &lt;= 15</td>
</tr>
<tr>
<td>quartz (SiO2)</td>
<td>14808-60-7</td>
<td>&gt;= 0 - &lt; 5</td>
</tr>
</tbody>
</table>

SECTION 4. FIRST AID MEASURES
MBR Cold Application Adhesive

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 breathing has stopped, apply artificial respiration.

In case of skin contact

Take off contaminated clothing and shoes immediately.
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 if irritation develops and persists.

In case of eye contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Remove contact lenses.
Keep eye wide open while rinsing.
Protect unharmed eye.
If eye irritation persists, consult a specialist.

If swallowed

Do NOT induce vomiting.
Rinse mouth with water.
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.

Notes to physician

In case of shortness of breath, give oxygen.
Symptoms of poisoning may not appear for several hours.
Keep under medical supervision for at least 48 hours.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media

Foam
Carbon dioxide (CO2)
Dry chemical
Water mist

Unsuitable extinguishing media

High volume water jet

Specific hazards during firefighting

May release toxic, irritating and/or corrosive gases.
Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products

Carbon oxides
Sulfur oxides

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
MBR Cold Application Adhesive

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: Keep away from open flames, hot surfaces and sources of ignition. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours).

Advice on safe handling: 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. Take measures to prevent the build up of electrostatic charge. 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/PERSOAL 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>asphalt</td>
<td>8052-42-4</td>
<td>TWA (Fume, inhalable fraction)</td>
<td>0.5 mg/m³ (benzene soluble aerosol)</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>C (Fumes)</td>
<td>5 mg/m³</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td>Stoddard solvent</td>
<td>8052-41-3</td>
<td>TWA</td>
<td>100 ppm</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>350 mg/m³</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>C</td>
<td>1,800 mg/m³</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>500 ppm</td>
<td>OSHA</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2,900 mg/m³</td>
<td>OSHA</td>
</tr>
<tr>
<td>quartz (SiO₂)</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></td>
<td>TWA (respirable)</td>
<td>OSHA</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>10 mg/m³ / %SiO₂+2</td>
<td>OSHA</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>TWA (respirable)</td>
<td>OSHA</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>250 mppcf / %SiO₂+5</td>
<td>OSHA</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>TWA (Respirable dust)</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0.05 mg/m³</td>
<td>OSHA</td>
</tr>
</tbody>
</table>

Personal protective equipment

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

Hand protection
Material: Protective 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

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 workplace.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- **Appearance**: liquid
- **Colour**: brown, black
- **Odour**: hydrocarbon-like
- **Odour Threshold**: No data available
- **pH**: No data available
- **Melting point/range**: No data available
- **Boiling point/boiling range**: 100 °C
- **Flash point**: 37.8 - 60.0 °C
  - Method: Cleveland open cup
- **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**: 1.08 - 1.20 g/cm³
- **Water solubility**: No data available
- **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
SAFETY DATA SHEET

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SECTION 10. STABILITY AND REACTIVITY

Reactivity: No decomposition if stored and applied as directed.

Chemical stability: Stable under normal conditions.

Possibility of hazardous reactions: Vapours may form explosive mixture with air. Stable under normal conditions.

Conditions to avoid: Heat, flames and sparks.

Incompatible materials: Strong oxidizing agents

Hazardous decomposition products: Thermal decomposition can lead to release of irritating gases and vapours. Carbon oxides Sulphur oxides

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity
Harmful if inhaled.

Product:
Acute oral toxicity: Acute toxicity estimate (Mouse): ca. 25,724.4473 mg/kg
Acute toxicity estimate (Rat): ca. 25,765.8477 mg/kg

Acute dermal toxicity: Acute toxicity estimate: 4,167 mg/kg
Method: Calculation method

Acute toxicity (other routes of administration): LD50 (Rat): 20,994.4746 mg/kg

Acute toxicity
Components:
asphalt:
Acute oral toxicity: LD50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity: LC50 (Rat): > 0.0944 mg/l
Exposure time: 4.5 h

Acute dermal toxicity: LD50 (Rabbit): > 2,000 mg/kg

Acute toxicity
Stoddard solvent:
Acute inhalation toxicity: LC50 (Rat): > 5.5 mg/l
Exposure time: 4 h
Test atmosphere: vapour
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Skin corrosion/irritation
Causes skin irritation.

**Product:**
Result: Skin irritation

Serious eye damage/eye irritation
Causes eye irritation.

**Product:**
Result: Eye irritation

Respiratory sensitisation: Not classified based on available information.

**Respiratory or skin sensitisation**
Skin sensitisation: Not classified based on available information.

**Product:**
Exposure routes: Skin contact
Result: Not a skin sensitizer.

<table>
<thead>
<tr>
<th>Agency</th>
<th>Classification</th>
<th>Material</th>
<th>CAS Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>IARC</td>
<td>Group 1: Carcinogenic to humans</td>
<td>quartz (SiO2)</td>
<td>14808-60-7</td>
</tr>
<tr>
<td>OSHA</td>
<td>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.</td>
<td>quartz (SiO2)</td>
<td>14808-60-7</td>
</tr>
<tr>
<td>NTP</td>
<td>Known to be human carcinogen</td>
<td>quartz (SiO2)</td>
<td>14808-60-7</td>
</tr>
</tbody>
</table>

STOT - single exposure
May cause drowsiness or dizziness.

**Product:**
Target Organs: Central nervous system

STOT - repeated exposure
May cause damage to organs through prolonged or repeated exposure if inhaled.

**Product:**
Assessment: May cause damage to organs through prolonged or repeated exposure.
MBR Cold Application Adhesive

Aspiration toxicity
Not classified based on available information.

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:

Stoddard solvent:
Partition coefficient: n-octanol/water: log Pow: 3.16 - 7.06

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

Components:
asphalt:
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
MBR Cold Application Adhesive

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: UN1999, Tars, liquid, 3, III.

Above applies only to containers over 119 gallons or 450 liters. Not regulated if shipped in packages less than or equal to 119 gallons (450 liters).

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
This material does not contain any components with a CERCLA RQ.

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
Fire Hazard

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

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act
This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).
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).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489).

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

- asphalt 8052-42-4
- Stoddard solvent 8052-41-3
- quartz (SiO2) 14808-60-7
- benzene 71-43-2
- benz[a]anthracene 56-55-3

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

- asphalt 8052-42-4
- Stoddard solvent 8052-41-3
- quartz (SiO2) 14808-60-7

**US. California Safe Drinking Water & Toxic Enforcement Act (Proposition 65)**

**WARNING!** This product contains a chemical known to the State of California to cause cancer.

- benz[a]anthracene 56-55-3
- benzene 71-43-2

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

- benzene 71-43-2

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

- **TSCA:** On TSCA Inventory
- **DSL:** All components of this product are on the Canadian DSL

**SECTION 16. OTHER INFORMATION**

*Further information*

**Revision Date:** 10/03/2017

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.