SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Trade name: JM Corbond® III Side A, JM Corbond® MCS Side A, JM Corbond® oc SPF Side A, JM Corbond® ocx SPF Side A

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

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification
Acute toxicity (Inhalation): Category 4
Skin irritation: Category 2
Eye irritation: Category 2A
Respiratory sensitisation: Category 1
Skin sensitisation: Category 1
Carcinogenicity: Category 2

GHS Label element
Hazard pictograms:

Signal word: Danger

Hazard statements:
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H351 Suspected of causing cancer.

Precautionary statements:
Prevention:
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves/ eye protection/ face protection.

**Response:**
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
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.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P321 Specific treatment (see supplemental first aid instructions on this label).
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P362 Take off contaminated clothing and wash before reuse.

**Storage:**
P405 Store locked up.

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

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**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>4,4’-methylene diphenyl diisocyanate</td>
<td>101-68-8</td>
<td>&gt;= 50 - &lt; 70</td>
</tr>
<tr>
<td>Diphenylmethanediisocyanate</td>
<td>9016-87-9</td>
<td>&gt;= 50 - &lt; 70</td>
</tr>
</tbody>
</table>

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**SECTION 4. FIRST AID MEASURES**

**General advice:**
Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.

**If inhaled:**
Call a physician or poison control centre immediately.
If unconscious place in recovery position and seek medical advice.

**In case of skin contact:**
If skin irritation persists, call a physician.
If on skin, rinse well with 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:
Induce vomiting immediately and call a physician. Keep respiratory tract clear. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Take victim immediately to hospital.

SECTION 5. FIREFIGHTING MEASURES

Unsuitable extinguishing media:
High volume water jet

Hazardous combustion products:
No hazardous combustion products are known

Specific extinguishing methods:

Further information:
Standard procedure for chemical fires.

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.

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:
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

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.
Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.

Conditions for safe storage: Keep container tightly closed in a dry and 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

<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>4,4’-methylene diphenyl diisocyanate</td>
<td>101-68-8</td>
<td>TWA</td>
<td>0.005 ppm</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>0.005 ppm</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>C</td>
<td>0.02 ppm</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>C</td>
<td>0.02 ppm</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

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. 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 : red brown
Odour : musty
Odour Threshold : No data available
pH : Not applicable
Melting point/freezing point : No data available
                         : > 300 °C
Flash point : 230 °C
               Method: 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 : 8.5
Relative density : 1.25
Solubility(ies)
   Water solubility : insoluble
   Solubility in other solvents : insoluble
Partition coefficient: n-octanol/water : Not applicable
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 decomposition if stored and applied as directed.
Chemical stability : No decomposition if stored and applied as directed.
Possibility of hazardous reactions: No decomposition if stored and applied as directed.

Conditions to avoid: No data available

Hazardous decomposition products: Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke). Nitrogen oxides (NOx)

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product: Acute inhalation toxicity
Acute toxicity estimate: 11 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: Calculation method

Skin corrosion/irritation

Product: Remarks: May cause skin irritation and/or dermatitis.

Serious eye damage/eye irritation

Product: Remarks: May cause irreversible eye damage.

Respiratory or skin sensitisation

Product: Remarks: May cause sensitisation of susceptible persons by skin contact or by inhalation of aerosol or dust.

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.

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.
STOT - single exposure

**Product:**
Assessment: May cause respiratory irritation.

STOT - repeated exposure

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

Further information

**Product:**
Remarks: No data available

### SECTION 12. ECOLOGICAL INFORMATION

**Ecotoxicity**
No data available

**Persistence and degradability**
No data available

**Bioaccumulative potential**
No data available

**Mobility in soil**
No data available

**Other adverse effects**
No data available

**Product:**

<table>
<thead>
<tr>
<th>Regulation</th>
<th>40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remarks</td>
<td>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).</td>
</tr>
<tr>
<td>Additional ecological information</td>
<td>: No data available</td>
</tr>
</tbody>
</table>

### SECTION 13. DISPOSAL CONSIDERATIONS

**Disposal methods**

<table>
<thead>
<tr>
<th>Disposal of residual product</th>
<th>Do not dispose of waste into sewer.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Do not contaminate ponds, waterways or ditches with chemical or used container.</td>
</tr>
<tr>
<td></td>
<td>Send to a licensed waste management company.</td>
</tr>
</tbody>
</table>
Contaminated packaging: Empty remaining contents. Dispose of as unused product. Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION

International transport regulations
These products are not classified as dangerous goods according to international transport regulations.

SECTION 15. REGULATORY INFORMATION

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>4,4’-methylenediphenyl diisocyanate</td>
<td>101-68-8</td>
<td>5000</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: No SARA Hazards

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:

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>4,4’-methylenediphenyl diisocyanate</td>
<td>101-68-8</td>
<td>50 %</td>
</tr>
<tr>
<td>Diphenylmethanediisocyanate</td>
<td>9016-87-9</td>
<td>50 %</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>Components</th>
<th>CAS-No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
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<td>4,4’-methylenediphenyl diisocyanate</td>
<td>101-68-8</td>
<td>50 %</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>
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<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
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<td>101-68-8</td>
<td>50 %</td>
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</tbody>
</table>

Massachusetts Right To Know

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>4,4’-methylenediphenyl diisocyanate</td>
<td>101-68-8</td>
<td>50 - 70 %</td>
</tr>
</tbody>
</table>
Pennsylvania Right To Know

4,4’-methylenediphenyl diisocyanate 101-68-8 50 - 70 %
Diphenylmethanediisocyanate 9016-87-9 50 - 70 %

New Jersey Right To Know

4,4’-methylenediphenyl diisocyanate 101-68-8 50 - 70 %
Diphenylmethanediisocyanate 9016-87-9 50 - 70 %

California Prop 65
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

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.

REACH : Not in compliance with the inventory
4,4’-methylenediphenyl diisocyanate
Diphenylmethanediisocyanate

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

CH INV : The formulation contains substances listed on the Swiss Inventory
Diphenylmethanediisocyanate
4,4’-methylenediphenyl diisocyanate

ENCS : Not in compliance with the inventory
Diphenylmethanediisocyanate

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

ISHL : Not in compliance with the inventory
Diphenylmethanediisocyanate

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

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

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

SECTION 16. OTHER INFORMATION

Further information
Revision Date : 03/04/2015
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.