JM Corbond® III and MCS Side B USA

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SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Trade name : JM Corbond® III Side B, JM Corbond® III-2.8 Side B, JM Corbond® MCS Side B

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)

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SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Specific target organ toxicity - repeated exposure : Category 2

GHS Label element

Hazard pictograms :

Signal word : Warning

Hazard statements : H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary statements : **Prevention:**
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
Response:
P314 Get medical advice/ attention if you feel unwell.
Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

The following percentage of the mixture consists of ingredient(s) with unknown acute toxicity: 4.02 %

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous components

Chemical Name	CAS-No.	Concentration (%)
1,1,1,3,3-Pentafluorpropan	460-73-1	>= 5 - < 10

tris(2-chloro-1-methylethyl) phosphate	13674-84-5	>= 1 - < 5
triethyl phosphate	78-40-0	>= 1 - < 5
trans-dichloroethylene	156-60-5	>= 1 - < 5
diethylmethylbenzenediamine	68479-98-1	>= 1 - < 5

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 : If unconscious place in recovery position and seek medical advice.
If symptoms persist, call a physician.

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.

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

SECTION 5. FIREFIGHTING MEASURES

Unsuitable extinguishing media : High volume water jet

Hazardous combustion products : No hazardous combustion products are known

Specific extinguishing methods : Standard procedure for chemical fires.

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.

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 protection against fire and explosion	:	Normal measures for preventive fire protection.
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. Dispose of rinse water in accordance with local and national regulations.
Conditions for safe storage	:	Keep container tightly closed in a dry and well-ventilated place. Electrical installations / working materials must comply with the technological safety standards.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
1,1,1,3,3-Pentafluorpropan	460-73-1	TWA	300 ppm	US WEEL
triethyl phosphate	78-40-0	TWA	7.45 mg/m3	US WEEL
trans-dichloroethylene	156-60-5	TWA	200 ppm	ACGIH

Personal protective equipment

Respiratory protection	:	Preferably a compressed airline breathing apparatus.
Hand protection		
Remarks	:	Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.
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 work place.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid
Colour	:	blue
Odour	:	No data available
Odour Threshold	:	No data available
pH	:	No data available
Melting point/freezing point	:	No data available
Initial boiling point and boiling range	:	No data available
Flash point	:	No data available
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
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

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).

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute oral toxicity	:	Acute toxicity estimate : > 5,000 mg/kg Method: Calculation method
Acute inhalation toxicity	:	Acute toxicity estimate : > 40 mg/l Exposure time: 4 h Test atmosphere: vapour Method: Calculation method
Acute dermal toxicity	:	Acute toxicity estimate : > 5,000 mg/kg Method: Calculation method

Acute toxicity

Components:

tris(2-chloro-1-methylethyl) phosphate:

Acute oral toxicity	:	LD50 (Rat): 632 mg/kg
Acute inhalation toxicity	:	LC50 (Rat): 4.6 mg/l Exposure time: 4 h
Acute dermal toxicity	:	LD50 (Rabbit): > 5,000 mg/kg

Acute toxicity

trans-dichloroethylene:

Acute inhalation toxicity	:	LC50 (Rat): 24100 ppm

Acute toxicity

diethylmethylbenzenediamine:

Acute oral toxicity	:	LD50 (Rat): 472 mg/kg
Acute inhalation toxicity	:	LC50 (Rat): 2.45 mg/l Exposure time: 1 h LC50 (Rat): > 2.45 mg/l Exposure time: 1 h
Acute dermal toxicity	:	LD50 (Rabbit): > 1,000 mg/kg

Skin corrosion/irritation

Components:

tris(2-chloro-1-methylethyl) phosphate:
Species: Rabbit
Result: No skin irritation

Skin corrosion/irritation

diethylmethylbenzenediamine:
Species: Rabbit
Exposure time: 4 h
Result: No skin irritation

Serious eye damage/eye irritation

Components:

tris(2-chloro-1-methylethyl) phosphate:
Species: Rabbit
Result: Mild eye irritation
Exposure time: 24 h
Method: Draize Test

Serious eye damage/eye irritation

diethylmethylbenzenediamine:
Species: Rabbit
Result: irritating

Respiratory or skin sensitisation

Components:

tris(2-chloro-1-methylethyl) phosphate:
Result: Does not cause skin sensitisation.

Germ cell mutagenicity

Components:

tris(2-chloro-1-methylethyl) phosphate:

Germ cell mutagenicity-Assessment	:	Not mutagenic in Ames Test

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.

Reproductive toxicity

Components:

tris(2-chloro-1-methylethyl) phosphate:

Effects on fertility	:	Species: Rat, male Application Route: Inhalation
Reproductive toxicity - Assessment	:	Experiments have shown reproductive toxicity effects in male and female laboratory animals. Did not show teratogenic effects in animal experiments.

STOT - repeated exposure

Components:

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

Repeated dose toxicity

Components:

tris(2-chloro-1-methylethyl) phosphate:
Species: Rat, male
NOAEL: 36 mg/kg
Application Route: Oral
Exposure time: 90 d

diethylmethylbenzenediamine:
Species: Rabbit, female
NOAEL: 1 mg/kg
Application Route: Skin contact

Species: Rat
NOAEL: 10 mg/l
Application Route: inhalation (gas)

Further information

Product:

Remarks: No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

tris(2-chloro-1-methylethyl) phosphate:

Toxicity to algae	:	EC50 (Scenedesmus capricornutum (fresh water algae)): 47 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia (water flea)): 32 mg/l

Persistence and degradability

Components:

tris(2-chloro-1-methylethyl) phosphate:

Biodegradability	:	Result: Not readily biodegradable.

Bioaccumulative potential

Components:

tris(2-chloro-1-methylethyl) phosphate:

Partition coefficient: n-octanol/water	:	log Pow: 2.68

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.

SECTION 14. TRANSPORT INFORMATION

International transport regulations

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

SECTION 15. REGULATORY INFORMATION

TSCA list

US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D) : diethylmethylbenzenediamine

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
trans-dichloroethylene	156-60-5	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 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

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

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

ethane-1,2-diol	107-21-1	0.532 %
2,2'-oxydiethanol	111-46-6	0.114 %

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):

ethane-1,2-diol	107-21-1	0.532 %
2,2'-oxydiethanol	111-46-6	0.114 %

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.

SECTION 16. OTHER INFORMATION

Further information

Revision Date	:	07/28/2015

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.