

**JM Closed-cell Spray Polyurethane Foam (cc SPF) – Component B
(USA)**

Version 2.1

Revision Date 05/14/2018

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SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Trade name : JM Corbond® III Closed-cell SPF – Component B, JM
Corbond® III 2.8 Closed-cell SPF – Component B, JM
Corbond MCS™ Closed-cell SPF – Component B, JM
Closed Cell B ND

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 : 1-800-424-9300 (Chemtrec, in English)
number

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**Specific target organ toxicity : Category 2
- repeated exposure**GHS label elements**

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.

JM Closed-cell Spray Polyurethane Foam (cc SPF) – Component B (USA)

Version 2.1

Revision Date 05/14/2018

Print Date 05/14/2018

Additional Labelling

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

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous components

Chemical name	CAS-No.	Concentration (%)
1,1,1,3,3-pentafluoropropane (HFC-245fa)	460-73-1	>= 5 - < 10
tris(2-chloro-1-methylethyl) phosphate	13674-84-5	>= 1 - < 5
triethyl phosphate	78-40-0	>= 1 - < 5
trans-1,2-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 : Remove to fresh air.
If breathing has stopped, apply artificial respiration.
If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician.
- 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.
Wash contaminated clothing before re-use.
Call a physician if irritation develops or persists.
Take off all contaminated clothing immediately.
- 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.
Protect unharmed eye.
Keep eye wide open while rinsing.
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.
Keep respiratory tract clear.
Obtain medical attention.
- Most important symptoms and effects, both acute and delayed : None known.

**JM Closed-cell Spray Polyurethane Foam (cc SPF) – Component B
(USA)**

Version 2.1

Revision Date 05/14/2018

Print Date 05/14/2018

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Water mist
Dry powder
Carbon dioxide (CO₂)
Foam
- Unsuitable extinguishing media : High volume water jet
- Hazardous combustion products : carbon oxides
nitrogen oxides
phosphorus oxides
halogenated compounds
- Specific extinguishing methods : 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 : Immediately evacuate personnel to safe areas.
Keep people away from and upwind of spill/leak.
Ensure adequate ventilation.
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.

JM Closed-cell Spray Polyurethane Foam (cc SPF) – Component B (USA)

Version 2.1

Revision Date 05/14/2018

Print Date 05/14/2018

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-pentafluoropropane (HFC-245fa)	460-73-1	TWA	300 ppm	US WEEL
triethyl phosphate	78-40-0	TWA	7.45 mg/m ³	US WEEL
trans-1,2-dichloroethylene	156-60-5	TWA	200 ppm	ACGIH

Johns Manville is a member of the Center for the Polyurethanes Industry (CPI) of the American Chemistry Council. For more information about safe work practices, see CPI's *Health and Safety Product Stewardship Workbook for High-Pressure Application of Spray Polyurethane Foam (SPF)* and other resources (some available in Spanish and French) at the following website hyperlinks: <https://www.spraypolyurethane.org/resources/> and <https://www.spraypolyurethane.org/additional-resources/>.

Personal protective equipment

Respiratory protection : Preferably a compressed airline breathing apparatus.

Hand protection

Material : Protective gloves

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

: Chemical resistant apron
 Full protective suit
 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.

**JM Closed-cell Spray Polyurethane Foam (cc SPF) – Component B
(USA)**

Version 2.1

Revision Date 05/14/2018

Print Date 05/14/2018

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: liquid
Colour	: various, lavender, tan
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	: > 94 °C
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 dangerous reaction known under conditions of normal use.
Chemical stability	: Stable under normal conditions.

JM Closed-cell Spray Polyurethane Foam (cc SPF) – Component B (USA)

Version 2.1

Revision Date 05/14/2018

Print Date 05/14/2018

Possibility of hazardous reactions	:	Contact with isocyanates will cause polymerization. Stable under recommended storage conditions.
Conditions to avoid	:	Protect from frost, heat and sunlight.
Incompatible materials	:	Strong oxidizing agents
Hazardous decomposition products	:	carbon oxides nitrogen oxides phosphorus oxides halogenated compounds

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-1,2-dichloroethylene:

Acute oral toxicity	:	LD50 (Rat): 7,902 mg/kg LD50 (Mouse): 2,122 mg/kg
Acute inhalation toxicity	:	LC50 (Rat): 96 mg/l Exposure time: 4 h
Acute dermal toxicity	:	LD0 (Rabbit): > 5,000 mg/kg

Acute toxicity

**JM Closed-cell Spray Polyurethane Foam (cc SPF) – Component B
(USA)**

Version 2.1

Revision Date 05/14/2018

Print Date 05/14/2018

diethylmethylenediamine:

Acute oral toxicity : LD50 (Rat): 472 mg/kg

Acute inhalation toxicity : LC50 (Rat): 2.45 mg/l
Exposure time: 1 hLC50 (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**diethylmethylenediamine:**

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**trans-1,2-dichloroethylene:**

Species: Rabbit

Result: Eye irritation

Serious eye damage/eye irritation**diethylmethylenediamine:**

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:**

**JM Closed-cell Spray Polyurethane Foam (cc SPF) – Component B
(USA)**

Version 2.1

Revision Date 05/14/2018

Print Date 05/14/2018

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

**JM Closed-cell Spray Polyurethane Foam (cc SPF) – Component B
(USA)**

Version 2.1

Revision Date 05/14/2018

Print Date 05/14/2018

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

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia (water flea)): 32 mg/l

trans-1,2-dichloroethylene:Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill sunfish)): 140 mg/l
Exposure time: 96 hToxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 220 mg/l
Exposure time: 48 hToxicity to algae : EC50 (Selenastrum capricornutum (green algae)): 798 mg/l
Exposure time: 96 hEC50 (Skeletonema costatum (marine diatom)): 712 mg/l
Exposure time: 96 h**Persistence and degradability****Components:****tris(2-chloro-1-methylethyl) phosphate:**

Biodegradability : Result: Not readily biodegradable.

trans-1,2-dichloroethylene:Biodegradability : Result: Not readily biodegradable.
Biodegradation: 8 %
Exposure time: 28 d**Bioaccumulative potential****Components:****tris(2-chloro-1-methylethyl) phosphate:**

Partition coefficient: n- : log Pow: 2.68

**JM Closed-cell Spray Polyurethane Foam (cc SPF) – Component B
(USA)**

Version 2.1

Revision Date 05/14/2018

Print Date 05/14/2018

octanol/water

trans-1,2-dichloroethylene:Partition coefficient: n- : log Pow: 2.06
octanol/water**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 : No data available
information**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**TSCA - 5(a) Significant New Use Rule List of : No substances are subject to a
Chemicals Significant New Use Rule.

U.S. Toxic Substances Control Act (TSCA) Section : No substances are subject to TSCA

JM Closed-cell Spray Polyurethane Foam (cc SPF) – Component B (USA)

Version 2.1

Revision Date 05/14/2018

Print Date 05/14/2018

12(b) Export Notification (40 CFR 707, Subpt D)

12(b) export notification requirements.

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

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
trans-1,2-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
diethylene glycol	111-46-6

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 SOCM I Intermediate or Final VOC's (40 CFR 60.489):

ethane-1,2-diol	107-21-1
diethylene glycol	111-46-6

US. California Safe Drinking Water & Toxic Enforcement Act (Proposition 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 : 05/14/2018

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

**JM Closed-cell Spray Polyurethane Foam (cc SPF) – Component B
(USA)**

Version 2.1

Revision Date 05/14/2018

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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.