MBR® Cold Application Adhesive

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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
Emergency telephone number	:	24-Hour Number: +1-800-424-9300 (CHEMTREC)

Company	:	Johns Manville Canada Inc.
Address	:	5301 42 Avenue Innisfail, AB Canada T4G 1A2
Telephone	:	+1-303-978-2000
Emergency telephone number	:	24-Hour Number: +1-800-424-9300 (CHEMTREC)

Recommended use of the chemical and restrictions on use

Recommended use	:	Adhesives and/or sealants
Restrictions on use	:	For professional users only.
Prepared by	:	productsafety@jm.com

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with 29 CFR 1910.1200 (OSHA HCS 2012) and the Hazardous Products Regulations (WHMIS 2015)

Flammable liquids	:	Category 3
Skin irritation	:	Category 2
Eye irritation	:	Category 2A
Germ cell mutagenicity	:	Category 1B
Carcinogenicity	:	Category 1A
Specific target organ toxicity - single exposure	:	Category 3 (Central nervous system)
Specific target organ toxicity - repeated exposure	:	Category 1

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : H226 Flammable liquid and vapour.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
H340 May cause genetic defects.
H350 May cause cancer.
H372 Causes 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.
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.
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:

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
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.
P332 + P313 If skin irritation occurs: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P362 Take off contaminated clothing and wash before reuse.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Storage:

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

Chemical name	CAS-No.	Concentration (%)
asphalt	8052-42-4	>= 30 - < 60
naphtha (petroleum), hydrotreated heavy	64742-48-9	>= 10 - < 30
solvent naphtha (petroleum), light arom.	64742-95-6	>= 5 - < 10
1,2,4-trimethylbenzene	95-63-6	>= 1 - < 5
benzene	71-43-2	>= 0.1 - < 1
quartz (SiO2)	14808-60-7	>= 0.1 - < 1

Actual concentration or concentration range is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

General advice : Handle in accordance with good industrial hygiene and safety practice.
Show this safety data sheet to the doctor in attendance.
Move out of dangerous area.
Do not leave the victim unattended.

If inhaled : Remove person to fresh air. If signs/symptoms continue, get medical attention.
If breathing is irregular or stopped, administer artificial respiration.

In case of skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
Call a physician if irritation develops or persists.

In case of eye contact : Rinse immediately with plenty of lukewarm water, also under the eyelids, for at least 15 minutes.
If easy to do, remove contact lens, if worn.
Keep eye wide open while rinsing.
Protect unharmed eye.
If eye irritation persists, consult a specialist.

If swallowed : DO NOT induce vomiting unless directed to do so by a physician or poison control center.
Gently wipe or rinse the inside of the mouth with water.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician or Poison Control Centre immediately.

Most important symptoms and effects, both acute and delayed : Causes skin irritation.
May cause drowsiness or dizziness.
May cause genetic defects.

May cause cancer.

Protection of first-aiders : If potential for exposure exists refer to Section 8 for specific personal protective equipment.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Carbon dioxide (CO2)
Foam
Dry powder
Water spray

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
Hydrogen sulfide

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 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.
Do not allow contact with soil, surface or ground water.
Do not flush into surface water or sanitary sewer system.

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).
Non-sparking tools should be used.
Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion	:	Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). Use only explosion-proof equipment. Keep away from open flames, hot surfaces and sources of ignition. Do not pressurise, cut, weld, braze, solder, drill, or grind on containers.
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. 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. 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. For personal protection see section 8.
Conditions for safe storage	:	No smoking. Keep containers tightly closed in a dry, cool and well-ventilated place. 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. Take measures to prevent the build up of electrostatic charge.
Materials to avoid	:	Keep away from oxidizing agents and strongly acid or alkaline materials.
Further information on storage stability	:	Stable at normal ambient temperature and pressure.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
asphalt	8052-42-4	TWA (Fume, inhalable	0.5 mg/m³ (benzene soluble	ACGIH

		fraction)	aerosol)	
		C (Fumes)	5 mg/m³	NIOSH REL
naphtha (petroleum), hydrotreated heavy	64742-48-9	TWA	500 ppm 2,000 mg/m³	OSHA
solvent naphtha (petroleum), light arom.	64742-95-6	TWA	500 ppm 2,000 mg/m³	OSHA
		TWA	200 mg/m³ (total hydrocarbon vapor)	ACGIH
1,2,4-trimethylbenzene	95-63-6	TWA	25 ppm 125 mg/m³	NIOSH REL
		TWA	25 ppm	ACGIH
benzene	71-43-2	TWA	0.5 ppm	ACGIH
		STEL	2.5 ppm	ACGIH
		TWA	0.1 ppm	NIOSH REL
		ST	1 ppm	NIOSH REL
		TWA	10 ppm	OSHA
		CEIL	25 ppm	OSHA
		Peak	50 ppm (10 minutes)	OSHA
		PEL	1 ppm	OSHA CARC
		STEL	5 ppm	OSHA CARC
quartz (SiO2)	14808-60-7	TWA (Respirable fraction)	0.025 mg/m³	ACGIH
		TWA (respirable)	10 mg/m3 / %SiO2+2	OSHA
		TWA (respirable)	250 mppcf / %SiO2+5	OSHA
		TWA (Respirable dust)	0.05 mg/m³	NIOSH REL
		TWA (Respirable dust)	0.05 mg/m³	OSHA

Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
benzene	71-43-2	S-Phenylmercapturic acid	Urine	End of shift (As soon as possible after exposure ceases)	25 µg/g creatinine	ACGIH BEI
		t,t-Muconic acid	Urine	End of shift (As soon as possible after exposure ceases)	500 µg/g creatinine	ACGIH BEI

Engineering measures : Use a local and/or general ventilation system.

Provide exhaust ventilation close to floor level.

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	:	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	:	Wear safety glasses with side shields or goggles. Wear face-shield and protective suit for abnormal processing problems.
Skin and body protection	:	Wear protective clothing, such as long-sleeved shirts and pants. Remove and wash contaminated clothing before re-use. Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.
Hygiene measures	:	Handle in accordance with good industrial hygiene and safety practice. When using do not eat, drink or 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	:	black
Odour	:	hydrocarbon-like
Odour Threshold	:	No data available
pH	:	No data available

Melting point/range	:	No data available
Initial boiling point and 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

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	:	No dangerous reaction known under conditions of normal use. Vapours may form explosive mixture with air.
Conditions to avoid	:	Heat, flames and sparks.
Incompatible materials	:	Strong oxidizing agents Strong acids and strong bases
Hazardous decomposition products	:	Thermal decomposition can lead to release of irritating gases and vapors.

carbon oxides
sulfur oxides

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute inhalation toxicity	:	Acute toxicity estimate : > 200 mg/l Exposure time: 4 h Test atmosphere: vapour Method: Calculation method
Acute dermal toxicity	:	Acute toxicity estimate : 3,742 mg/kg Method: Calculation method

Acute toxicity

Components:

asphalt:

Acute oral toxicity	:	LD50 (Rat, male and female): > 5,000 mg/kg Method: OECD Test Guideline 401
Acute inhalation toxicity	:	LC50 (Rat, male and female): > 0.0944 mg/l Exposure time: 4.5 h Test atmosphere: vapour Method: OECD Test Guideline 403 Assessment: The substance or mixture has no acute inhalation toxicity
Acute dermal toxicity	:	LD50 (Rabbit, male and female): > 2,000 mg/kg Method: OECD Test Guideline 402

Acute toxicity

naphtha (petroleum), hydrotreated heavy:

Acute oral toxicity	:	LD50 (Rat, male and female): > 5,000 mg/kg Method: OECD Test Guideline 401 Remarks: No mortality was observed. Information given is based on data obtained from similar substances.
Acute inhalation toxicity	:	LC50 (Rat, male and female): > 5,610 mg/l Exposure time: 4 h Test atmosphere: vapour Method: OECD Test Guideline 403 Remarks: No mortality was observed. Information given is based on data obtained from similar substances.
Acute dermal toxicity	:	LD50 (Rabbit, male and female): > 2,000 mg/kg Method: OECD Test Guideline 402 Remarks: No mortality was observed. Information given is based on data obtained from similar substances.

Acute toxicity

solvent naphtha (petroleum), light arom.:

Acute oral toxicity : LD50 (Rat, male and female): > 5,000 mg/kg
Method: OECD Test Guideline 401
Remarks: No mortality was observed.
Information given is based on data obtained from similar substances.

Acute inhalation toxicity : LC50 (Rat, male and female): > 5,610 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: OECD Test Guideline 403
Remarks: No mortality was observed.
Information given is based on data obtained from similar substances.

Acute dermal toxicity : LD50 (Rabbit, male and female): > 2,000 mg/kg
Method: OECD Test Guideline 402
Remarks: No mortality was observed.
Information given is based on data obtained from similar substances.

Acute toxicity

1,2,4-trimethylbenzene:

Acute oral toxicity : LD50 (Rat, male): 6,000 mg/kg
Method: EC Directive 92/69/EEC B.1 Acute Toxicity (Oral)

Acute inhalation toxicity : LC50 (Rat, male and female): 10.2 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Remarks: No mortality was observed.
Information given is based on data obtained from similar substances.

Acute dermal toxicity : LD50 (Rat, male and female): 3,440 mg/kg
Remarks: No mortality was observed.
Information given is based on data obtained from similar substances.

Acute toxicity

benzene:

Acute oral toxicity : LD50 (Rat, male): > 2,000 mg/kg
Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat, female): 43.767 mg/l, 13700 ppm
Exposure time: 4 h
Test atmosphere: vapour
Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rabbit): > 8,260 mg/kg
Method: OECD Test Guideline 402

Acute toxicity

quartz (SiO2):

Acute oral toxicity	:	LD50 (Rat): > 22,500 mg/kg
Acute inhalation toxicity	:	Assessment: The substance or mixture has no acute inhalation toxicity
Acute dermal toxicity	:	Assessment: The substance or mixture has no acute dermal toxicity

Skin corrosion/irritation

Components:

naphtha (petroleum), hydrotreated heavy:
Result: Skin irritation

Skin corrosion/irritation

solvent naphtha (petroleum), light arom.:
Result: Skin irritation

Skin corrosion/irritation

1,2,4-trimethylbenzene:
Result: Skin irritation

Skin corrosion/irritation

benzene:
Species: Rabbit
Exposure time: 4 h
Method: OECD Test Guideline 404
Result: Irritating to skin.

Serious eye damage/eye irritation

Product:

Result: irritating

Serious eye damage/eye irritation

Components:

1,2,4-trimethylbenzene:
Result: irritating

Serious eye damage/eye irritation

benzene:
Species: Rabbit
Result: Irritating to eyes.

Germ cell mutagenicity

Components:

benzene:

Germ cell mutagenicity-	:	In vivo tests showed mutagenic effects

Assessment

Carcinogenicity

Components:

benzene:

Carcinogenicity - Assessment	: Human carcinogen.	
IARC	Group 1: Carcinogenic to humans	
	benzene	71-43-2
	quartz (SiO2)	14808-60-7
OSHA	OSHA specifically regulated carcinogen	
	benzene	71-43-2
NTP	Known to be human carcinogen	
	benzene	71-43-2
	quartz (SiO2)	14808-60-7

STOT - single exposure

Components:

naphtha (petroleum), hydrotreated heavy:
Exposure routes: inhalation (vapour)
Target Organs: Central nervous system
Assessment: May cause drowsiness or dizziness.

STOT - single exposure

solvent naphtha (petroleum), light arom.:
Exposure routes: inhalation (vapour)
Target Organs: Central nervous system
Assessment: May cause drowsiness or dizziness.

STOT - single exposure

1,2,4-trimethylbenzene:
Target Organs: Respiratory Tract
Assessment: May cause respiratory irritation.

STOT - repeated exposure

Product:

Assessment: Causes damage to organs through prolonged or repeated exposure.

STOT - repeated exposure

Components:

benzene:
Exposure routes: Ingestion

Target Organs: hematopoietic system
Assessment: Causes damage to organs through prolonged or repeated exposure.

Exposure routes: inhalation (vapour)
Target Organs: hematopoietic system
Assessment: Causes damage to organs through prolonged or repeated exposure.

Aspiration toxicity

Product:

No aspiration toxicity classification

Components:

naphtha (petroleum), hydrotreated heavy:
May be fatal if swallowed and enters airways.

solvent naphtha (petroleum), light arom.:
May be fatal if swallowed and enters airways.

1,2,4-trimethylbenzene:
May be fatal if swallowed and enters airways.

benzene:
May be fatal if swallowed and enters airways.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Ecotoxicology Assessment

Acute aquatic toxicity	:	Toxic to aquatic life.
Chronic aquatic toxicity	:	Toxic to aquatic life with long lasting effects.

Components:

naphtha (petroleum), hydrotreated heavy:

Toxicity to fish	:	LL50 (Oncorhynchus mykiss (rainbow trout)): 10 mg/l End point: mortality Exposure time: 96 h Test Type: semi-static test Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EL50 (Daphnia magna (Water flea)): 4.5 mg/l End point: Immobilization Exposure time: 48 h Test Type: static test Method: OECD Test Guideline 202
Toxicity to algae	:	NOELR (Pseudokirchneriella subcapitata (algae)): 0.5 mg/l Exposure time: 72 h

Test Type: static test
Method: OECD Test Guideline 201

EL50 (Pseudokirchneriella subcapitata (algae)): 3.7 mg/l
Exposure time: 96 h
Test Type: static test
Method: OECD Test Guideline 201

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOELR (Daphnia magna (Water flea)): 2.6 mg/l
Exposure time: 21 d
Test Type: semi-static test
Method: OECD Test Guideline 211

solvent naphtha (petroleum), light arom.:

Toxicity to fish : LL50 (Oncorhynchus mykiss (rainbow trout)): 10 mg/l
End point: mortality
Exposure time: 96 h
Test Type: semi-static test
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): 4.5 mg/l
End point: Immobilization
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202

Toxicity to algae : NOELR (Pseudokirchneriella subcapitata (algae)): 0.5 mg/l
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201

EL50 (Pseudokirchneriella subcapitata (algae)): 3.1 mg/l
End point: see user defined free text
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOELR (Daphnia magna (Water flea)): 2.6 mg/l
Exposure time: 21 d
Test Type: semi-static test
Method: OECD Test Guideline 211

1,2,4-trimethylbenzene:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 7.72 mg/l
End point: mortality
Exposure time: 96 h
Test Type: flow-through test

Toxicity to daphnia and other aquatic invertebrates : LC50 (Daphnia magna (Water flea)): 3.6 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202

Toxicity to algae : EC50 (green algae): 2.356 mg/l
Exposure time: 96 h
Remarks: The value is given based on a SAR/AAR approach

using OECD Toolbox, DEREK, VEGA QSAR models (CAESAR models), etc.

Toxicity to fish (Chronic toxicity)	:	Chronic Toxicity Value: 0.396 mg/l End point: mortality Exposure time: 30 d Remarks: The value is given based on a SAR/AAR approach using OECD Toolbox, DEREK, VEGA QSAR models (CAESAR models), etc.
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	Chronic Toxicity Value (Daphnia sp. (water flea)): 0.367 mg/l End point: mortality Exposure time: 16 d Remarks: The value is given based on a SAR/AAR approach using OECD Toolbox, DEREK, VEGA QSAR models (CAESAR models), etc.

benzene:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 5.3 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 10 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae	:	EC50 (Selenastrum capricornutum (green algae)): 100 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
Toxicity to fish (Chronic toxicity)	:	EC10 (Pimephales promelas (fathead minnow)): 0.8 mg/l Exposure time: 32 d
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	EC10 (Ceriodaphnia dubia): 3 mg/l Exposure time: 7 d
Toxicity to microorganisms	:	IC50 (activated sludge): 13 mg/l Exposure time: 24 h

quartz (SiO2):

Toxicity to fish	:	LC50 (Cyprinus carpio (Carp)): > 10,000 mg/l Exposure time: 72 h

Persistence and degradability

Components:

naphtha (petroleum), hydrotreated heavy:

Biodegradability	:	Result: Inherently biodegradable.

solvent naphtha (petroleum), light arom.:

Biodegradability	:	Result: Inherently biodegradable.

1,2,4-trimethylbenzene:

Biodegradability : Result: Biodegradable

benzene:

Biodegradability : Biodegradation: 100 %

Bioaccumulative potential

Components:

1,2,4-trimethylbenzene:

Partition coefficient: n-octanol/water : log Pow: 3.63

benzene:

Bioaccumulation : Bioconcentration factor (BCF): 13

Partition coefficient: n-octanol/water : log Pow: 2.13 (25 °C)
pH: 7

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

Waste from residues : Dispose of contents/container to an approved facility in accordance with local, regional, national and international regulations.
The product should not be allowed to enter drains, water courses or the soil.

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

Land transport
USDOT: Not regulated if shipped in packages less than or equal to 119 gallons (450 liters).
TDG: Not regulated if shipped in packages less than or equal to 119 gallons (450 liters).

Sea transport
IMDG: UN1999, Tars, liquid, 3, III (40 °C c.c.)

Air transport
IATA/ICAO: UN1999, Tars, liquid, 3, 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.

U.S. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpart D) : No substances are subject to TSCA 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)
benzene	71-43-2	10	1000

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 : Flammable (gases, aerosols, liquids, or solids)
Germ cell mutagenicity
Carcinogenicity
Specific target organ toxicity (single or repeated exposure)
Skin corrosion or irritation
Serious eye damage or eye irritation

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:

1,2,4-trimethylbenzene 95-63-6 1 - 5 %

benzene	71-43-2	0.1 - 1 %

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).

California Prop. 65

⚠**WARNING:** This product can expose you to chemicals including benzene, which is/are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

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

TSCA : All substances listed as active on the TSCA inventory

DSL : All components of this product are on the Canadian DSL

SECTION 16. OTHER INFORMATION

Further information

Revision Date : 02/16/2021

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.