Safety Data Sheet

This Safety Data Sheet has been prepared in accordance with the SS586 Specification for Hazard Communication for Hazardous Chemicals and Dangerous Goods.

Document group:	10-9092-7	**Version number:**	1.15
Issue Date:	05/02/2024	**Supersedes date:**	28/07/2023

SECTION 1: Identification

1.1. Product identifier
3M™ Scotch-Weld™ Structural Adhesive Primer EC-3924B

1.2. Recommended use and restrictions on use

Recommended use
Primer for adhesive, Industrial use.

1.3. Supplier's details
Address: 3M Technologies (S) Pte Ltd,10 Ang Mo Kio Street 65, Singapore 569059
Telephone: +65 6450 8888
Website: www.3m.com.sg

1.4. Emergency telephone number
+65 6591 6601 (8.15am - 5.00pm, Monday - Friday)

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture
Flammable Liquid: Category 2.
Serious Eye Damage/Irritation: Category 1.
Skin Sensitizer: Category 1.
Reproductive Toxicity: Category 1B.
Carcinogenicity: Category 1A.
Specific Target Organ Toxicity (single exposure): Category 3.

2.2. Label elements
SIGNAL WORD
DANGER!

Symbols
Flame | Corrosion | Exclamation mark | Health Hazard |

Pictograms

HAZARD STATEMENTS

H225	Highly flammable liquid and vapour.
H318	Causes serious eye damage.
H317	May cause an allergic skin reaction.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H360	May damage fertility or the unborn child.
H350	May cause cancer.

PRECAUTIONARY STATEMENTS

Prevention:

P201	Obtain special instructions before use.
P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P280B	Wear protective gloves and eye/face protection.

Response:

P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor/physician.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P370 + P378G	In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

2.3. Other hazards

Repeated exposure may cause skin dryness or cracking.

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	CAS Nbr	% by Wt
4-Hydroxy-4-methylpentan-2-one	123-42-2	15 - 40
Butanone	78-93-3	15 - 40
Tetrahydrofuran	109-99-9	< 20
Epoxy Resin	25036-25-3	< 10
1-Methoxypropan-2-ol	107-98-2	< 5
Acetone	67-64-1	<= 5
Water	7732-18-5	< 5
Strontium Chromate (VI)	7789-06-2	< 1
Phenol-Formaldehyde Polymer Glycidyl Ether	28064-14-4	< 1
4-Methylpentan-2-one	108-10-1	<= 0.99
Toluene	108-88-3	<= 0.99
Phenolic Polymer	9003-35-4	< 0.4
Methanol	67-56-1	< 0.3
Barium Chromate	10294-40-3	< 0.1

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation
Remove person to fresh air. If you feel unwell, get medical attention.

Skin contact
Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

Eye contact
Immediately flush with large amounts of water for at least 15 minutes. Remove contact lenses if easy to do. Continue rinsing. Immediately get medical attention.

If swallowed
Rinse mouth. If you feel unwell, get medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Irritating to the respiratory tract (coughing, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain). Allergic skin reaction (redness, swelling, blistering, and itching). Serious damage to the eyes (corneal cloudiness, severe pain, tearing, ulcerations, and significantly impaired or loss of vision). Central nervous system depression (headache, dizziness, drowsiness, incoordination, nausea, slurred speech, giddiness, and unconsciousness).

4.3. Indication of any immediate medical attention and special treatment required
Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media
In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

5.2. Special hazards arising from the substance or mixture
Closed containers exposed to heat from fire may build pressure and explode.

Hazardous Decomposition or By-Products

Substance	Condition
Aldehydes.	During combustion.
Formaldehyde	During combustion.
Carbon monoxide.	During combustion.
Carbon dioxide.	During combustion.

5.3. Special protective actions for fire-fighters
Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture. Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Evacuate area. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. Refer to other sections of this SDS for

information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions
Avoid release to the environment. For larger spills, cover drains and build dykes to prevent entry into sewer systems or bodies of water.

6.3. Methods and material for containment and cleaning up
Contain spill. Cover spill area with a fire-extinguishing foam. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible using non-sparking tools. Place in a metal container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorised person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and Safety Data Sheet. Seal the container. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
For industrial/occupational use only. Not for consumer sale or use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Avoid contact with oxidising agents (eg. chlorine, chromic acid etc.) Wear low static or properly grounded shoes. Use personal protective equipment (eg. gloves, respirators…) as required. To minimize the risk of ignition, determine applicable electrical classifications for the process using this product and select specific local exhaust ventilation equipment to avoid flammable vapor accumulation. Ground/bond container and receiving equipment if there is potential for static electricity accumulation during transfer.

7.2. Conditions for safe storage including any incompatibilities
Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store away from heat. Store away from acids. Store away from oxidising agents.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits
If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient	CAS Nbr	Agency	Limit type	Additional comments
Chromium (hexavalent compounds)	10294-40-3	ACGIH	TWA(as Cr(IV), inhalable fraction):0.0002 mg/m3;STEL(as Cr(IV), inhalable fraction):0.0005 mg/m3	A1: Confirmed human carcin.
Chromium(6+), insoluble compounds	10294-40-3	ACGIH	TWA(as Cr):0.01 mg/m3	A1: Confirmed human carcin.
Chromium(6+), insoluble compounds	10294-40-3	Singapore PELs	TWA(as Cr)(8 hours):0.01 mg/m3	
Water-soluble inorganic Cr(6+) compounds	10294-40-3	ACGIH	TWA(as Cr):0.05 mg/m3	A1: Confirmed human carcin.
1-Methoxypropan-2-ol	107-98-2	ACGIH	TWA:50 ppm;STEL:100 ppm	A4: Not class. as human

				carcin
1-Methoxypropan-2-ol	107-98-2	Singapore PELs	TWA(8 hours):369 mg/m3(100 ppm);STEL(15 minutes):553 mg/m3(150 ppm)	
4-Methylpentan-2-one	108-10-1	ACGIH	TWA:20 ppm;STEL:75 ppm	A3: Confirmed animal carcin.
4-Methylpentan-2-one	108-10-1	Singapore PELs	TWA(8 hours):205 mg/m3(50 ppm);STEL(15 minutes):307 mg/m3(75 ppm)	
Toluene	108-88-3	ACGIH	TWA:20 ppm	A4: Not class. as human carcin, Ototoxicant
Toluene	108-88-3	Singapore PELs	TWA(8 hours):188 mg/m3(50 ppm)	
Tetrahydrofuran	109-99-9	ACGIH	TWA:50 ppm;STEL:100 ppm	A3: Confirmed animal carcin., Danger of cutaneous absorption
Tetrahydrofuran	109-99-9	Singapore PELs	TWA(8 hours):590 mg/m3(200 ppm);STEL(15 minutes):737 mg/m3(250 ppm)	
4-Hydroxy-4-methylpentan-2-one	123-42-2	ACGIH	TWA:50 ppm	
4-Hydroxy-4-methylpentan-2-one	123-42-2	Singapore PELs	TWA(8 hours):238 mg/m3(50 ppm)	
Methanol	67-56-1	ACGIH	TWA:200 ppm;STEL:250 ppm	Danger of cutaneous absorption
Methanol	67-56-1	Singapore PELs	TWA(8 hours):262 mg/m3(200 ppm);STEL(15 minutes):328 mg/m3(250 ppm)	
Acetone	67-64-1	ACGIH	TWA:250 ppm;STEL:500 ppm	A4: Not class. as human carcin
Acetone	67-64-1	Singapore PELs	TWA(8 hours):1780 mg/m3(750 ppm);STEL(15 minutes):2380 mg/m3(1000 ppm)	
Chromium (hexavalent compounds)	7789-06-2	ACGIH	TWA(as Cr(IV), inhalable fraction):0.0002 mg/m3;STEL(as Cr(IV), inhalable fraction):0.0005 mg/m3	A1: Confirmed human carcin.
Chromium(6+), insoluble compounds	7789-06-2	ACGIH	TWA(as Cr):0.01 mg/m3	A1: Confirmed human carcin.
Strontium Chromate (VI)	7789-06-2	Singapore PELs	TWA(8 hours):0.0005 mg/m3	
Water-soluble inorganic Cr(6+) compounds	7789-06-2	ACGIH	TWA(as Cr):0.05 mg/m3	A1: Confirmed human carcin.
Butanone	78-93-3	ACGIH	TWA:200 ppm;STEL:300 ppm	
Butanone	78-93-3	Singapore PELs	TWA(8 hours):590 mg/m3(200 ppm);STEL(15 minutes):885 mg/m3(300 ppm)	

ACGIH : American Conference of Governmental Industrial Hygienists
AIHA : American Industrial Hygiene Association
CMRG : Chemical Manufacturer's Recommended Guidelines
Singapore PELs : Singapore. Workplace Safety and Health (Permissible Exposure Levels of Toxic Substances) Order
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling

8.2. Exposure controls

8.2.1. Engineering controls
Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapours/spray. If ventilation is not adequate, use respiratory protection equipment. Use explosion-proof ventilation equipment.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:
Full face shield.
Indirect vented goggles.

Skin/hand protection
Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity.
Gloves made from the following material(s) are recommended: Polymer laminate

If this product is used in a manner that presents a higher potential for exposure (eg. spraying, high splash potential etc.), then use of protective coveralls may be necessary. Select and use body protection to prevent contact based on the results of an
Apron - polymer laminate

Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:
Half facepiece or full facepiece air-purifying respirator suitable for organic vapours and particulates
Half facepiece or full facepiece supplied-air respirator

For questions about suitability for a specific application, consult with your respirator manufacturer.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid.
Color	Yellow
Odor	Solvent
Odour threshold	*No data available.*
pH	*No data available.*
Melting point/Freezing point	*Not applicable.*
Boiling point/Initial boiling point/Boiling range	>=66 ºC
Flash point	-14.4 ºC [*Test Method:*Closed Cup] [*Details:*Tetrahydrofuran]
Evaporation rate	>=2 [*Ref Std:*ETHER=1]
Flammability (solid, gas)	Not applicable.
Flammable Limits(LEL)	1.8 % volume
Flammable Limits(UEL)	11.8 % volume
Vapour pressure	<=21,598.2 Pa [@ 25 ºC]
Vapor Density and/or Relative Vapor Density	2.5 [*Ref Std:*AIR=1]

Density	0.89 g/ml
Relative density	0.89 [*Ref Std:*WATER=1]
Water solubility	Slight (less than 10%)
Solubility- non-water	*No data available.*
Partition coefficient: n-octanol/water	*No data available.*
Autoignition temperature	321 ºC [*Details:*Tetrahydrofuran]
Decomposition temperature	*No data available.*
Viscosity/Kinematic Viscosity	10 mPa-s [@ 23 ºC]
Volatile organic compounds (VOC)	846 g/l [*Test Method:*calculated SCAQMD rule 443.1]
Percent volatile	95 %
VOC less H2O & exempt solvents	907 g/l [*Test Method:*calculated SCAQMD rule 443.1]

SECTION 10: Stability and reactivity

10.1 Reactivity
This material may be reactive with certain agents under certain conditions - see the remaining headings in this section

10.2 Chemical stability
Stable.

10.3 Possibility of hazardous reactions
Hazardous polymerisation will not occur.

10.4 Conditions to avoid
Heat.
Sparks and/or flames.

10.5 Incompatible materials
Strong oxidising agents.
Strong acids.

10.6 Hazardous decomposition products

Substance	**Condition**
None known.	

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labelling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1 Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation
May be harmful if inhaled. Respiratory tract irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. May cause additional health effects (see below).

Skin contact
Prolonged or repeated exposure may cause: Dermal Defatting: Signs/symptoms may include localized redness, itching, drying and cracking of skin. Allergic skin reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching. May cause additional health effects (see below).

Eye contact
Corrosive (eye burns): Signs/symptoms may include cloudy appearance of the cornea, chemical burns, severe pain, tearing, ulcerations, significantly impaired vision or complete loss of vision.

Ingestion
May be harmful if swallowed.
Gastrointestinal irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhoea. May cause additional health effects (see below).

Additional Health Effects:

Single exposure may cause target organ effects:
Central nervous system (CNS) depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

Reproductive/Developmental Toxicity:
Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

Carcinogenicity:
Contains a chemical or chemicals which can cause cancer.

Toxicological Data
If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE >5,000 mg/kg
Overall product	Inhalation-Vapor(4 hr)		No data available; calculated ATE >20 - =50 mg/l
Overall product	Ingestion		No data available; calculated ATE >2,000 - =5,000 mg/kg
Butanone	Dermal	Rabbit	LD50 > 8,050 mg/kg
Butanone	Inhalation-Vapor (4 hours)	Rat	LC50 34.5 mg/l
Butanone	Ingestion	Rat	LD50 2,737 mg/kg
4-Hydroxy-4-methylpentan-2-one	Dermal	Rabbit	LD50 13,645 mg/kg
4-Hydroxy-4-methylpentan-2-one	Inhalation-Vapor (4 hours)	Rat	LC50 > 7.6 mg/l
4-Hydroxy-4-methylpentan-2-one	Ingestion	Rat	LD50 3,002 mg/kg
Tetrahydrofuran	Dermal	Rat	LD50 > 2,000 mg/kg
Tetrahydrofuran	Inhalation-Vapor (4 hours)	Rat	LC50 54 mg/l
Tetrahydrofuran	Ingestion	Rat	LD50 1,650 mg/kg
Acetone	Dermal	Rabbit	LD50 > 15,688 mg/kg
Acetone	Inhalation-Vapor (4 hours)	Rat	LC50 76 mg/l
Acetone	Ingestion	Rat	LD50 5,800 mg/kg
Epoxy Resin	Dermal	Rat	LD50 > 1,600 mg/kg
Epoxy Resin	Ingestion	Rat	LD50 > 1,000 mg/kg

1-Methoxypropan-2-ol	Dermal	Rabbit	LD50 11,000-13,800 mg/kg
1-Methoxypropan-2-ol	Inhalation-Vapor (4 hours)	Rat	LC50 56 mg/l
1-Methoxypropan-2-ol	Ingestion	Rat	LD50 6,100 mg/kg
4-Methylpentan-2-one	Dermal	Rabbit	LD50 > 16,000 mg/kg
4-Methylpentan-2-one	Inhalation-Vapor (4 hours)	Rat	LC50 11 mg/l
4-Methylpentan-2-one	Ingestion	Rat	LD50 3,038 mg/kg
Toluene	Dermal	Rat	LD50 12,000 mg/kg
Toluene	Inhalation-Vapor (4 hours)	Rat	LC50 30 mg/l
Toluene	Ingestion	Rat	LD50 5,550 mg/kg
Phenol-Formaldehyde Polymer Glycidyl Ether	Dermal	Rabbit	LD50 > 6,000 mg/kg
Phenol-Formaldehyde Polymer Glycidyl Ether	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 1.7 mg/l
Phenol-Formaldehyde Polymer Glycidyl Ether	Ingestion	Rat	LD50 > 4,000 mg/kg
Strontium Chromate (VI)	Dermal		LD50 estimated to be 2,000 - 5,000 mg/kg
Strontium Chromate (VI)	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.27 mg/l
Strontium Chromate (VI)	Ingestion	Rat	LD50 3,118 mg/kg
Methanol	Dermal		LD50 estimated to be 1,000 - 2,000 mg/kg
Methanol	Inhalation-Vapor		LC50 estimated to be 10 - 20 mg/l
Methanol	Ingestion		LD50 estimated to be 50 - 300 mg/kg
Phenolic Polymer	Dermal	Rat	LD50 > 2,000 mg/kg
Phenolic Polymer	Ingestion	Rat	LD50 > 2,900 mg/kg
Barium Chromate	Dermal		LD50 estimated to be 2,000 - 5,000 mg/kg
Barium Chromate	Ingestion	Rat	LD50 3,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Butanone	Rabbit	Minimal irritation
4-Hydroxy-4-methylpentan-2-one	Rabbit	No significant irritation
Tetrahydrofuran	Rabbit	Minimal irritation
Acetone	Mouse	Minimal irritation
Epoxy Resin	Rabbit	Mild irritant
1-Methoxypropan-2-ol	Not available	Minimal irritation
4-Methylpentan-2-one	Rabbit	Mild irritant
Toluene	Rabbit	Irritant
Phenol-Formaldehyde Polymer Glycidyl Ether	Rabbit	Minimal irritation
Strontium Chromate (VI)	Professional judgement	Mild irritant
Methanol	Rabbit	Mild irritant
Phenolic Polymer	Human and animal	Mild irritant

Serious Eye Damage/Irritation

Name	Species	Value
Butanone	Rabbit	Severe irritant
4-Hydroxy-4-methylpentan-2-one	Rabbit	Severe irritant
Tetrahydrofuran	Rabbit	Corrosive
Acetone	Rabbit	Severe irritant

Epoxy Resin	Rabbit	Moderate irritant
1-Methoxypropan-2-ol	Not available	Mild irritant
4-Methylpentan-2-one	Rabbit	Mild irritant
Toluene	Rabbit	Moderate irritant
Phenol-Formaldehyde Polymer Glycidyl Ether	Rabbit	Mild irritant
Strontium Chromate (VI)	Rabbit	Mild irritant
Methanol	Rabbit	Moderate irritant
Phenolic Polymer	Human and animal	Moderate irritant

Sensitization:

Skin Sensitisation

Name	Species	Value
4-Hydroxy-4-methylpentan-2-one	Guinea pig	Not classified
Tetrahydrofuran	Human and animal	Not classified
Epoxy Resin	Human and animal	Sensitising
1-Methoxypropan-2-ol	Guinea pig	Not classified
4-Methylpentan-2-one	Guinea pig	Not classified
Toluene	Guinea pig	Not classified
Phenol-Formaldehyde Polymer Glycidyl Ether	Human and animal	Sensitising
Strontium Chromate (VI)	similar compounds	Sensitising
Methanol	Guinea pig	Not classified
Phenolic Polymer	Human and animal	Sensitising
Barium Chromate	similar compounds	Not classified

Respiratory Sensitisation

Name	Species	Value
Epoxy Resin	Human	Not classified
Phenolic Polymer	Human	Not classified

Germ Cell Mutagenicity

Name	Route	Value
Butanone	In Vitro	Not mutagenic
4-Hydroxy-4-methylpentan-2-one	In Vitro	Some positive data exist, but the data are not sufficient for classification
Tetrahydrofuran	In Vitro	Not mutagenic
Tetrahydrofuran	In vivo	Not mutagenic
Acetone	In vivo	Not mutagenic
Acetone	In Vitro	Some positive data exist, but the data are not sufficient for classification
Epoxy Resin	In vivo	Not mutagenic

Epoxy Resin	In Vitro	Some positive data exist, but the data are not sufficient for classification
1-Methoxypropan-2-ol	In Vitro	Not mutagenic
4-Methylpentan-2-one	In Vitro	Not mutagenic
Toluene	In Vitro	Not mutagenic
Toluene	In vivo	Not mutagenic
Phenol-Formaldehyde Polymer Glycidyl Ether	In Vitro	Some positive data exist, but the data are not sufficient for classification
Strontium Chromate (VI)	In vivo	Mutagenic
Methanol	In Vitro	Some positive data exist, but the data are not sufficient for classification
Methanol	In vivo	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Butanone	Inhalation	Human	Not carcinogenic
Tetrahydrofuran	Inhalation	Multiple animal species	Carcinogenic.
Acetone	Not specified.	Multiple animal species	Not carcinogenic
Epoxy Resin	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
1-Methoxypropan-2-ol	Inhalation	Multiple animal species	Some positive data exist, but the data are not sufficient for classification
4-Methylpentan-2-one	Inhalation	Multiple animal species	Carcinogenic.
Toluene	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
Toluene	Ingestion	Rat	Some positive data exist, but the data are not sufficient for classification
Toluene	Inhalation	Mouse	Some positive data exist, but the data are not sufficient for classification
Strontium Chromate (VI)	Not specified.	similar compounds	Carcinogenic.
Methanol	Inhalation	Multiple animal species	Not carcinogenic
Barium Chromate	Not specified.	similar compounds	Carcinogenic.

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
Butanone	Inhalation	Not classified for development	Rat	LOAEL 8.8 mg/l	during gestation
4-Hydroxy-4-methylpentan-2-one	Ingestion	Not classified for female reproduction	Rat	NOAEL 300 mg/kg/day	premating into lactation
4-Hydroxy-4-methylpentan-2-one	Ingestion	Not classified for male reproduction	Rat	NOAEL 300 mg/kg/day	44 days
4-Hydroxy-4-methylpentan-2-one	Ingestion	Toxic to development	Rabbit	NOAEL 100 mg/kg/day	during gestation
Tetrahydrofuran	Ingestion	Not classified for female reproduction	Rat	NOAEL 782 mg/kg/day	2 generation
Tetrahydrofuran	Ingestion	Not classified for male reproduction	Rat	NOAEL 782 mg/kg/day	2 generation
Tetrahydrofuran	Ingestion	Not classified for development	Rat	NOAEL 305 mg/kg/day	2 generation

Tetrahydrofuran	Inhalation	Not classified for development	Mouse	NOAEL 1.8 mg/l	during gestation
Acetone	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,700 mg/kg/day	13 weeks
Acetone	Inhalation	Not classified for development	Rat	NOAEL 5.2 mg/l	during organogenesis
Epoxy Resin	Ingestion	Not classified for female reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
Epoxy Resin	Ingestion	Not classified for male reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
Epoxy Resin	Dermal	Not classified for development	Rabbit	NOAEL 300 mg/kg/day	during organogenesis
Epoxy Resin	Ingestion	Not classified for development	Rat	NOAEL 750 mg/kg/day	2 generation
1-Methoxypropan-2-ol	Inhalation	Not classified for male reproduction	Rat	NOAEL 11 mg/l	2 generation
1-Methoxypropan-2-ol	Ingestion	Not classified for female reproduction	Mouse	NOAEL 3,328 mg/kg/day	2 generation
1-Methoxypropan-2-ol	Inhalation	Not classified for female reproduction	Rat	NOAEL 3.7 mg/l	2 generation
1-Methoxypropan-2-ol	Ingestion	Not classified for male reproduction	Mouse	NOAEL 3,328 mg/kg	2 generation
1-Methoxypropan-2-ol	Ingestion	Not classified for development	Rat	NOAEL 370 mg/kg	during gestation
1-Methoxypropan-2-ol	Inhalation	Not classified for development	Rat	NOAEL 3.7 mg/l	2 generation
4-Methylpentan-2-one	Inhalation	Not classified for female reproduction	Multiple animal species	NOAEL 8.2 mg/l	2 generation
4-Methylpentan-2-one	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	13 weeks
4-Methylpentan-2-one	Inhalation	Not classified for male reproduction	Multiple animal species	NOAEL 8.2 mg/l	2 generation
4-Methylpentan-2-one	Inhalation	Not classified for development	Mouse	NOAEL 12.3 mg/l	during organogenesis
Toluene	Inhalation	Not classified for female reproduction	Human	NOAEL Not available	occupational exposure
Toluene	Inhalation	Not classified for male reproduction	Rat	NOAEL 2.3 mg/l	1 generation
Toluene	Ingestion	Toxic to development	Rat	LOAEL 520 mg/kg/day	during gestation
Toluene	Inhalation	Toxic to development	Human	NOAEL Not available	poisoning and/or abuse
Strontium Chromate (VI)	Ingestion	Toxic to female reproduction	similar compounds	NOAEL Not available	
Strontium Chromate (VI)	Ingestion	Toxic to male reproduction	similar compounds	NOAEL Not available	
Strontium Chromate (VI)	Ingestion	Toxic to development	similar compounds	NOAEL Not available	
Methanol	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,600 mg/kg/day	21 days
Methanol	Ingestion	Toxic to development	Mouse	LOAEL 4,000 mg/kg/day	during organogenesis
Methanol	Inhalation	Toxic to development	Mouse	NOAEL 1.3 mg/l	during organogenesis
Barium Chromate	Not specified.	Not classified for reproduction and/or development	similar compounds	NOAEL Not available	premating & during gestation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Butanone	Inhalation	central nervous system depression	May cause drowsiness or dizziness	official classification	NOAEL Not available	
Butanone	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
Butanone	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	NOAEL Not available	
Butanone	Ingestion	liver	Not classified	Rat	NOAEL Not available	not applicable
Butanone	Ingestion	kidney and/or bladder	Not classified	Rat	LOAEL 1,080 mg/kg	not applicable
4-Hydroxy-4-methylpentan-2-one	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Multiple animal species	NOAEL Not available	
4-Hydroxy-4-methylpentan-2-one	Inhalation	respiratory irritation	May cause respiratory irritation	Human	NOAEL Not available	
4-Hydroxy-4-methylpentan-2-one	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human and animal	NOAEL Not available	
4-Hydroxy-4-methylpentan-2-one	Ingestion	blood	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 1,882 mg/kg	
4-Hydroxy-4-methylpentan-2-one	Ingestion	liver	Not classified	Rat	NOAEL 1,882 mg/kg	not applicable
Tetrahydrofuran	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Tetrahydrofuran	Inhalation	respiratory irritation	May cause respiratory irritation		NOAEL Not available	
Tetrahydrofuran	Inhalation	respiratory system	Not classified	Rabbit	NOAEL 2.9 mg/l	4 hours
Tetrahydrofuran	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Rat	NOAEL 180 mg/kg	not applicable
Acetone	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Acetone	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
Acetone	Inhalation	immune system	Not classified	Human	NOAEL 1.19 mg/l	6 hours
Acetone	Inhalation	liver	Not classified	Guinea pig	NOAEL Not available	
Acetone	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	poisoning and/or abuse
1-Methoxypropan-2-ol	Dermal	central nervous system depression	Not classified	Rabbit	NOAEL 1,800 mg/kg	13 weeks
1-Methoxypropan-2-ol	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
4-Methylpentan-2-one	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	LOAEL 0.1 mg/l	2 hours
4-Methylpentan-2-one	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
4-Methylpentan-2-one	Inhalation	vascular system	Not classified	Dog	NOAEL Not available	not available
4-Methylpentan-2-one	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Rat	LOAEL 900 mg/kg	not applicable
Toluene	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	

Toluene	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
Toluene	Inhalation	immune system	Not classified	Mouse	NOAEL 0.004 mg/l	3 hours
Toluene	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	poisoning and/or abuse
Strontium Chromate (VI)	Inhalation	respiratory irritation	May cause respiratory irritation	similar compounds	NOAEL Not available	
Strontium Chromate (VI)	Ingestion	kidney and/or bladder	Causes damage to organs	similar compounds	NOAEL Not available	
Methanol	Inhalation	blindness	Causes damage to organs	Human	NOAEL Not available	occupational exposure
Methanol	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	not available
Methanol	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL Not available	6 hours
Methanol	Ingestion	blindness	Causes damage to organs	Human	NOAEL Not available	poisoning and/or abuse
Methanol	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	poisoning and/or abuse
Phenolic Polymer	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human and animal	NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Butanone	Dermal	nervous system	Not classified	Guinea pig	NOAEL Not available	31 weeks
Butanone	Inhalation	liver | kidney and/or bladder | heart | endocrine system | gastrointestinal tract | bone, teeth, nails, and/or hair | hematopoietic system | immune system | muscles	Not classified	Rat	NOAEL 14.7 mg/l	90 days
Butanone	Ingestion	liver	Not classified	Rat	NOAEL Not available	7 days
Butanone	Ingestion	nervous system	Not classified	Rat	NOAEL 173 mg/kg/day	90 days
4-Hydroxy-4-methylpentan-2-one	Inhalation	liver | kidney and/or bladder	Not classified	Rat	NOAEL 4.5 mg/l	6 weeks
4-Hydroxy-4-methylpentan-2-one	Ingestion	endocrine system | liver | kidney and/or bladder | hematopoietic system | nervous system | eyes	Not classified	Rat	NOAEL 600 mg/kg/day	13 weeks
Tetrahydrofuran	Inhalation	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 0.6 mg/l	12 weeks
Tetrahydrofuran	Inhalation	respiratory system	Not classified	Rat	NOAEL 2.9 mg/l	12 weeks
Tetrahydrofuran	Inhalation	kidney and/or bladder	Not classified	Rat	NOAEL 0.6 mg/l	105 weeks
Tetrahydrofuran	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL Not available	2 weeks
Acetone	Dermal	eyes	Not classified	Guinea pig	NOAEL Not available	3 weeks
Acetone	Inhalation	hematopoietic	Not classified	Human	NOAEL 3	6 weeks

		system			mg/l	
Acetone	Inhalation	immune system	Not classified	Human	NOAEL 1.19 mg/l	6 days
Acetone	Inhalation	kidney and/or bladder	Not classified	Guinea pig	NOAEL 119 mg/l	not available
Acetone	Inhalation	heart | liver	Not classified	Rat	NOAEL 45 mg/l	8 weeks
Acetone	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 900 mg/kg/day	13 weeks
Acetone	Ingestion	heart	Not classified	Rat	NOAEL 2,500 mg/kg/day	13 weeks
Acetone	Ingestion	hematopoietic system	Not classified	Rat	NOAEL 200 mg/kg/day	13 weeks
Acetone	Ingestion	liver	Not classified	Mouse	NOAEL 3,896 mg/kg/day	14 days
Acetone	Ingestion	eyes	Not classified	Rat	NOAEL 3,400 mg/kg/day	13 weeks
Acetone	Ingestion	respiratory system	Not classified	Rat	NOAEL 2,500 mg/kg/day	13 weeks
Acetone	Ingestion	muscles	Not classified	Rat	NOAEL 2,500 mg/kg	13 weeks
Acetone	Ingestion	skin | bone, teeth, nails, and/or hair	Not classified	Mouse	NOAEL 11,298 mg/kg/day	13 weeks
Epoxy Resin	Dermal	liver	Not classified	Rat	NOAEL 1,000 mg/kg/day	2 years
Epoxy Resin	Dermal	nervous system	Not classified	Rat	NOAEL 1,000 mg/kg/day	13 weeks
Epoxy Resin	Ingestion	auditory system | heart | endocrine system | hematopoietic system | liver | eyes | kidney and/or bladder	Not classified	Rat	NOAEL 1,000 mg/kg/day	28 days
1-Methoxypropan-2-ol	Dermal	kidney and/or bladder	Not classified	Rabbit	NOAEL 1,800 mg/kg/day	13 weeks
1-Methoxypropan-2-ol	Dermal	hematopoietic system	Not classified	Rabbit	NOAEL 1,000 mg/kg/day	3 weeks
1-Methoxypropan-2-ol	Inhalation	kidney and/or bladder	Not classified	Rat	NOAEL 3.7 mg/l	13 weeks
1-Methoxypropan-2-ol	Inhalation	liver	Not classified	Rat	NOAEL 11 mg/l	13 weeks
1-Methoxypropan-2-ol	Inhalation	hematopoietic system	Not classified	Rat	NOAEL 2.2 mg/l	10 days
1-Methoxypropan-2-ol	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 920 mg/kg/day	13 weeks
1-Methoxypropan-2-ol	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 920 mg/kg/day	13 weeks
4-Methylpentan-2-one	Inhalation	liver	Not classified	Rat	NOAEL 0.41 mg/l	13 weeks
4-Methylpentan-2-one	Inhalation	heart	Not classified	Multiple animal species	NOAEL 0.8 mg/l	2 weeks
4-Methylpentan-2-one	Inhalation	kidney and/or bladder	Not classified	Multiple animal species	NOAEL 0.4 mg/l	90 days
4-Methylpentan-2-one	Inhalation	respiratory system	Not classified	Multiple animal	NOAEL 4.1 mg/l	14 weeks

				species		
4-Methylpentan-2-one	Inhalation	endocrine system | hematopoietic system	Not classified	Multiple animal species	NOAEL 0.41 mg/l	90 days
4-Methylpentan-2-one	Inhalation	nervous system	Not classified	Multiple animal species	NOAEL 0.41 mg/l	13 weeks
4-Methylpentan-2-one	Ingestion	endocrine system | hematopoietic system | liver | kidney and/or bladder	Not classified	Rat	NOAEL 1,000 mg/kg/day	13 weeks
4-Methylpentan-2-one	Ingestion	heart | immune system | muscles | nervous system | respiratory system	Not classified	Rat	NOAEL 1,040 mg/kg/day	120 days
Toluene	Inhalation	auditory system | nervous system | eyes | olfactory system	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	poisoning and/or abuse
Toluene	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 2.3 mg/l	15 months
Toluene	Inhalation	heart | liver | kidney and/or bladder	Not classified	Rat	NOAEL 11.3 mg/l	15 weeks
Toluene	Inhalation	endocrine system	Not classified	Rat	NOAEL 1.1 mg/l	4 weeks
Toluene	Inhalation	immune system	Not classified	Mouse	NOAEL Not available	20 days
Toluene	Inhalation	bone, teeth, nails, and/or hair	Not classified	Mouse	NOAEL 1.1 mg/l	8 weeks
Toluene	Inhalation	hematopoietic system | vascular system	Not classified	Human	NOAEL Not available	occupational exposure
Toluene	Inhalation	gastrointestinal tract	Not classified	Multiple animal species	NOAEL 11.3 mg/l	15 weeks
Toluene	Ingestion	nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 625 mg/kg/day	13 weeks
Toluene	Ingestion	heart	Not classified	Rat	NOAEL 2,500 mg/kg/day	13 weeks
Toluene	Ingestion	liver | kidney and/or bladder	Not classified	Multiple animal species	NOAEL 2,500 mg/kg/day	13 weeks
Toluene	Ingestion	hematopoietic system	Not classified	Mouse	NOAEL 600 mg/kg/day	14 days
Toluene	Ingestion	endocrine system	Not classified	Mouse	NOAEL 105 mg/kg/day	28 days
Toluene	Ingestion	immune system	Not classified	Mouse	NOAEL 105 mg/kg/day	4 weeks
Strontium Chromate (VI)	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	similar compoun ds	NOAEL Not available	
Strontium Chromate (VI)	Ingestion	kidney and/or bladder	May cause damage to organs though prolonged or repeated exposure	similar compoun ds	NOAEL Not available	
Methanol	Inhalation	liver	Not classified	Rat	NOAEL 6.55 mg/l	4 weeks
Methanol	Inhalation	respiratory system	Not classified	Rat	NOAEL 13.1 mg/l	6 weeks
Methanol	Ingestion	liver | nervous system	Not classified	Rat	NOAEL 2,500 mg/kg/day	90 days
Phenolic Polymer	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure

Barium Chromate	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	similar compounds	NOAEL Not available	occupational exposure

Aspiration Hazard

Name	Value
4-Methylpentan-2-one	Some positive data exist, but the data are not sufficient for classification
Toluene	Aspiration hazard

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. Additional information leading to material classification in Section 2 is available upon request. In addition, environmental fate and effects data on ingredients may not be reflected in this section because an ingredient is present below the threshold for labelling, an ingredient is not expected to be available for exposure, or the data is considered not relevant to the material as a whole.

12.1. Toxicity

Acute aquatic hazard:
GHS Acute 2: Toxic to aquatic life.

Chronic aquatic hazard:
GHS Chronic 3: Harmful to aquatic life with long lasting effects.

No product test data available.

Material	CAS Nbr	Organism	Type	Exposure	Test endpoint	Test result
4-Hydroxy-4-methylpentan-2-one	123-42-2	Activated sludge	Experimental	3 hours	EC50	>1,000 mg/l
4-Hydroxy-4-methylpentan-2-one	123-42-2	Bacteria	Experimental	16 hours	NOEC	825 mg/l
4-Hydroxy-4-methylpentan-2-one	123-42-2	Green algae	Experimental	72 hours	EC50	>1,000 mg/l
4-Hydroxy-4-methylpentan-2-one	123-42-2	Inland Silverside	Experimental	96 hours	LC50	420 mg/l
4-Hydroxy-4-methylpentan-2-one	123-42-2	Medaka	Experimental	96 hours	LC50	>100 mg/l
4-Hydroxy-4-methylpentan-2-one	123-42-2	Water flea	Experimental	48 hours	EC50	>1,000 mg/l
4-Hydroxy-4-methylpentan-2-one	123-42-2	Green algae	Experimental	72 hours	NOEC	1,000 mg/l
4-Hydroxy-4-methylpentan-2-one	123-42-2	Water flea	Experimental	21 days	NOEC	100 mg/l
Butanone	78-93-3	Fathead minnow	Experimental	96 hours	LC50	2,993 mg/l
Butanone	78-93-3	Green algae	Experimental	96 hours	ErC50	2,029 mg/l
Butanone	78-93-3	Water flea	Experimental	48 hours	EC50	308 mg/l
Butanone	78-93-3	Green algae	Experimental	96 hours	ErC10	1,289 mg/l
Butanone	78-93-3	Water flea	Experimental	21 days	NOEC	100 mg/l

Butanone	78-93-3	Bacteria	Experimental	16 hours	LOEC	1,150 mg/l
Tetrahydrofuran	109-99-9	Activated sludge	Experimental	3 hours	IC50	460 mg/l
Tetrahydrofuran	109-99-9	Fathead minnow	Experimental	96 hours	LC50	2,160 mg/l
Tetrahydrofuran	109-99-9	Water flea	Experimental	48 hours	LC50	3,485 mg/l
Tetrahydrofuran	109-99-9	Fathead minnow	Experimental	33 days	NOEC	216 mg/l
Epoxy Resin	25036-25-3	Green algae	Estimated	72 hours	EC50	>11 mg/l
Epoxy Resin	25036-25-3	Rainbow trout	Estimated	96 hours	LC50	2 mg/l
Epoxy Resin	25036-25-3	Water flea	Estimated	48 hours	EC50	1.8 mg/l
Epoxy Resin	25036-25-3	Green algae	Estimated	72 hours	NOEC	4.2 mg/l
Epoxy Resin	25036-25-3	Water flea	Estimated	21 days	NOEC	0.3 mg/l
1-Methoxypropan-2-ol	107-98-2	Activated sludge	Experimental	3 hours	IC50	>1,000 mg/l
1-Methoxypropan-2-ol	107-98-2	Activated sludge	Experimental	16 hours	EC50	>5,000 mg/l
1-Methoxypropan-2-ol	107-98-2	Algae or other aquatic plants	Experimental	72 hours	EC50	6,745 mg/l
1-Methoxypropan-2-ol	107-98-2	Golden Orfe	Experimental	96 hours	LC50	6,812 mg/l
1-Methoxypropan-2-ol	107-98-2	Green algae	Experimental	96 hours	EC50	>1,000 mg/l
1-Methoxypropan-2-ol	107-98-2	Water flea	Experimental	48 hours	EC50	23,300 mg/l
Acetone	67-64-1	Algae or other aquatic plants	Experimental	96 hours	EC50	11,493 mg/l
Acetone	67-64-1	Invertebrate	Experimental	24 hours	LC50	2,100 mg/l
Acetone	67-64-1	Rainbow trout	Experimental	96 hours	LC50	5,540 mg/l
Acetone	67-64-1	Water flea	Experimental	21 days	NOEC	1,000 mg/l
Acetone	67-64-1	Bacteria	Experimental	16 hours	NOEC	1,700 mg/l
Acetone	67-64-1	Redworm	Experimental	48 hours	LC50	>100
Phenol-Formaldehyde Polymer Glycidyl Ether	28064-14-4	Golden Orfe	Experimental	96 hours	LC50	5.7 mg/l
Phenol-Formaldehyde Polymer Glycidyl Ether	28064-14-4	Water flea	Experimental	48 hours	EC50	3.5 mg/l
Strontium Chromate (VI)	7789-06-2	Fish	Estimated	96 hours	LC50	81.5 mg/l
Strontium Chromate (VI)	7789-06-2	Green algae	Estimated	72 hours	ErC50	0.912 mg/l
Strontium Chromate (VI)	7789-06-2	Water flea	Estimated	48 hours	EC50	0.0806 mg/l
Strontium Chromate (VI)	7789-06-2	Brook trout	Estimated	8 months	NOEC	0.04 mg/l
Strontium Chromate (VI)	7789-06-2	Duckweed	Estimated	7 days	NOEC	0.43 mg/l
Strontium Chromate (VI)	7789-06-2	Green algae	Estimated	72 hours	ErC10	0.04 mg/l
Strontium Chromate (VI)	7789-06-2	Water flea	Estimated	7 days	NOEC	0.018 mg/l
Strontium Chromate (VI)	7789-06-2	Activated sludge	Estimated	3 hours	IC50	120 mg/l
Strontium Chromate (VI)	7789-06-2	Arthropod	Estimated	28 days	NOEC	200 ppm diet
Strontium Chromate (VI)	7789-06-2	Lettuce	Estimated	14 days	EC50	7 mg/kg (Dry Weight)
Strontium Chromate (VI)	7789-06-2	Redworm	Estimated	14 days	EC50	3,100 mg/kg (Dry Weight)
Strontium Chromate (VI)	7789-06-2	Soil microbes	Estimated	4 days	NOEC	<1 mg/l
4-Methylpentan-2-one	108-10-1	Green algae	Experimental	96 hours	EC50	400 mg/l
4-Methylpentan-2-one	108-10-1	Water flea	Experimental	48 hours	EC50	>200 mg/l
4-Methylpentan-2-one	108-10-1	Zebra Fish	Experimental	96 hours	LC50	>179 mg/l

4-Methylpentan-2-one	108-10-1	Fathead minnow	Experimental	32 days	NOEC	56.2 mg/l
4-Methylpentan-2-one	108-10-1	Water flea	Experimental	21 days	NOEC	78 mg/l
4-Methylpentan-2-one	108-10-1	Activated sludge	Experimental	30 minutes	EC50	>1,000
Toluene	108-88-3	Coho Salmon	Experimental	96 hours	LC50	5.5 mg/l
Toluene	108-88-3	Grass Shrimp	Experimental	96 hours	LC50	9.5 mg/l
Toluene	108-88-3	Green algae	Experimental	72 hours	EC50	12.5 mg/l
Toluene	108-88-3	Leopard frog	Experimental	9 days	LC50	0.39 mg/l
Toluene	108-88-3	Pink Salmon	Experimental	96 hours	LC50	6.41 mg/l
Toluene	108-88-3	Water flea	Experimental	48 hours	EC50	3.78 mg/l
Toluene	108-88-3	Coho Salmon	Experimental	40 days	NOEC	1.39 mg/l
Toluene	108-88-3	Diatom	Experimental	72 hours	NOEC	10 mg/l
Toluene	108-88-3	Water flea	Experimental	7 days	NOEC	0.74 mg/l
Toluene	108-88-3	Activated sludge	Experimental	12 hours	IC50	292 mg/l
Toluene	108-88-3	Bacteria	Experimental	16 hours	NOEC	29 mg/l
Toluene	108-88-3	Bacteria	Experimental	24 hours	EC50	84 mg/l
Toluene	108-88-3	Redworm	Experimental	28 days	LC50	>150 mg per kg of bodyweight
Toluene	108-88-3	Soil microbes	Experimental	28 days	NOEC	<26 mg/kg (Dry Weight)
Phenolic Polymer	9003-35-4	N/A	Data not available or insufficient for classification	N/A	N/A	n/a
Methanol	67-56-1	Algae or other aquatic plants	Experimental	96 hours	EC50	16.9 mg/l
Methanol	67-56-1	Bay mussel	Experimental	96 hours	LC50	15,900 mg/l
Methanol	67-56-1	Bluegill	Experimental	96 hours	LC50	15,400 mg/l
Methanol	67-56-1	Green algae	Experimental	96 hours	ErC50	22,000 mg/l
Methanol	67-56-1	Sediment organism	Experimental	96 hours	LC50	54,890 mg/l
Methanol	67-56-1	Water flea	Experimental	48 hours	LC50	3,289 mg/l
Methanol	67-56-1	Green algae	Experimental	96 hours	NOEC	9.96 mg/l
Methanol	67-56-1	Medaka	Experimental	8.33 days	NOEC	158,000 mg/l
Methanol	67-56-1	Water flea	Experimental	21 days	NOEC	122 mg/l
Methanol	67-56-1	Activated sludge	Experimental	3 hours	IC50	>1,000 mg/l
Methanol	67-56-1	Barley	Experimental	14 days	EC50	15,492 mg/kg (Dry Weight)
Methanol	67-56-1	Redworm	Experimental	63 days	EC50	26,646 mg/kg (Dry Weight)
Methanol	67-56-1	Springtail	Experimental	28 days	EC50	5,683 mg/kg (Dry Weight)
Barium Chromate	10294-40-3	Water flea	Estimated	48 hours	EC50	0.04 mg/l

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
4-Hydroxy-4-methylpentan-2-one	123-42-2	Experimental Biodegradation	28 days	Dissolv. Organic Carbon Deplet	98.5 %removal of DOC	
Butanone	78-93-3	Experimental Biodegradation	28 days	BOD	98 %BOD/ThOD	OECD 301D - Closed bottle test
Tetrahydrofuran	109-99-9	Experimental Biodegradation	28 days	BOD	39 %BOD/ThOD	
Epoxy Resin	25036-25-3	Estimated Biodegradation	28 days	BOD	5 %BOD/ThOD	OECD 301F - Manometric respirometry
Epoxy Resin	25036-25-3	Estimated Hydrolysis		Hydrolytic half-life	117 hours (t 1/2)	
1-Methoxypropan-2-ol	107-98-2	Experimental Biodegradation	28 days	BOD	90 %BOD/ThOD	OECD 301C - MITI test (I)
Acetone	67-64-1	Experimental Biodegradation	28 days	BOD	78 %BOD/ThOD	OECD 301D - Closed bottle test
Acetone	67-64-1	Experimental Photolysis		Photolytic half-life (in air)	147 days (t 1/2)	
Phenol-Formaldehyde	28064-14-4	Laboratory Biodegradation	28 days	CO2 evolution	10-16 %CO2 evolution/THCO2	OECD 301B - Modified sturm or CO2

Polymer Glycidyl Ether					evolution (does not pass 10-day window)	
Strontium Chromate (VI)	7789-06-2	Data not available-insufficient	N/A	N/A	N/A	N/A
4-Methylpentan-2-one	108-10-1	Experimental Biodegradation	28 days	BOD	83 %BOD/ThOD	OECD 301F - Manometric respirometry
4-Methylpentan-2-one	108-10-1	Experimental Photolysis		Photolytic half-life (in air)	2.3 days (t 1/2)	
Toluene	108-88-3	Experimental Biodegradation	20 days	BOD	80 %BOD/ThOD	APHA Std Meth Water/Wastewater
Toluene	108-88-3	Experimental Photolysis		Photolytic half-life (in air)	5.2 days (t 1/2)	
Phenolic Polymer	9003-35-4	Estimated Biodegradation	28 days	BOD	3 %BOD/ThOD	
Methanol	67-56-1	Experimental Biodegradation	3 days	Percent degraded	91 %degraded	
Methanol	67-56-1	Experimental Biodegradation	14 days	BOD	92 %BOD/ThOD	OECD 301C - MITI test (I)
Methanol	67-56-1	Experimental Photolysis		Photolytic half-life (in air)	35 days (t 1/2)	
Methanol	67-56-1	Experimental Soil Metabolism Aerobic	5 days	CO2 evolution	53.4 %CO2 evolution/THCO2 evolution	
Barium Chromate	10294-40-3	Data not available-insufficient	N/A	N/A	N/A	N/A

12.3 : Bioaccumulative potential

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
4-Hydroxy-4-methylpentan-2-one	123-42-2	Experimental Bioconcentration		Log Kow	-0.14	
Butanone	78-93-3	Experimental Bioconcentration		Log Kow	0.3	OECD 117 log Kow HPLC method
Tetrahydrofuran	109-99-9	Experimental Bioconcentration		Log Kow	0.45	
Epoxy Resin	25036-25-3	Estimated Bioconcentration		Log Kow	3.242	
1-Methoxypropan-2-ol	107-98-2	Experimental Bioconcentration		Log Kow	-0.437	
Acetone	67-64-1	Experimental BCF - Other		Bioaccumulation factor	0.65	
Acetone	67-64-1	Experimental Bioconcentration		Log Kow	-0.24	
Phenol-Formaldehyde Polymer Glycidyl Ether	28064-14-4	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Strontium Chromate (VI)	7789-06-2	Estimated BCF - Other		Bioaccumulation factor	610-3400	
4-Methylpentan-2-one	108-10-1	Experimental Bioconcentration		Log Kow	1.9	OECD 117 log Kow HPLC method
Toluene	108-88-3	Experimental BCF - Other	72 hours	Bioaccumulation factor	90	
Toluene	108-88-3	Experimental Bioconcentration		Log Kow	2.73	
Phenolic Polymer	9003-35-4	Estimated Bioconcentration		Bioaccumulation factor	2.57	
Methanol	67-56-1	Experimental BCF - Fish	3 days	Bioaccumulation factor	<4.5	
Methanol	67-56-1	Experimental Bioconcentration		Log Kow	-0.77	
Barium Chromate	10294-40-3	Estimated BCF -	40 days	Bioaccumulation	2650	

		Other		factor		

12.4. Mobility in soil
Please contact manufacturer for more details

12.5 Other adverse effects
No information available.

SECTION 13: Disposal considerations

13.1. Disposal methods
Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Dispose of waste product in a permitted industrial waste facility. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

SECTION 14: Transport Information

International Regulations

UN No.: UN1263, UN1845
UN Proper shipping name: PAINT RELATED MATERIAL, Carbon Dioxide, Solid

Transportation Class (IMO): 3-3 Flammable liquid
Transportation Class (IATA): 3-3 Flammable liquid
Other Dangerous Goods Descriptions (IMO): None assigned
Other Dangerous Goods Descriptions (IATA): None assigned
Packing Group: II
Marine pollutant: None assigned

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Global inventory status
Contact 3M for more information. The components of this material are in compliance with the provisions of Australia National Industrial Chemical Notification and Assessment Scheme (NICNAS). Certain restrictions may apply. Contact the selling division for additional information. The components of this product are in compliance with the new substance notification requirements of CEPA. This product complies with Measures on Environmental Management of New Chemical Substances. All ingredients are listed on or exempt from on China IECSC inventory. The components of this product are in compliance with the chemical notification requirements of TSCA. All required components of this product are listed on the active portion of the TSCA Inventory.

This product may contain component(s) that are regulated by the following:
Workplace Safety and Health Act & Workplace Safety and Health (General Provisions) Regulations: this product is subject to SDS, labelling, PEL and other requirements in the Act/Regulations.
Fire Safety (Petroleum and Flammable Materials) Regulations: This product is subject to the requirements in the Regulations
Sewerage & Drainage Act and Sewerage and Drainage (Trade Effluent) Regulations: This product is subject to the requirements in the act/regulation.
Misuse of Drug Act: This product is subject to the requirements of the Act.
Environmental Protection and Management (Hazardous Substances) Regulations: This product is subject to the requirements in the Regulations

SECTION 16: Other information

DISCLAIMER: The information on this Safety Data Sheet is based on our experience and is correct to the best of our knowledge at the date of publication, but we do not accept any liability for any loss, damage or injury resulting from its use (except as required by law). The information may not be valid for any use not referred to in this Data Sheet or use of the product in combination with other materials. For these reasons, it is important that customers carry out their own test to satisfy themselves as to the suitability of the product for their own intended applications.

3M Singapore SDSs are available at www.3m.com.sg