



Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the REACH Regulation (EC) 1907/2006 and its modifications.

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

3M Scotchkote Epoxy Coating EA4 2217 (Part B)

Product identification numbers

GR-2001-0413-5 GR-2001-0414-3 GR-2001-0416-8

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses

Coating.

1.3. Details of the supplier of the substance or mixture

Address: 3M United Kingdom PLC, 3M Centre, Cain Road, Bracknell, Berkshire, RG12 8HT.

E Mail: tox.uk@mmm.com

Website: www.3M.com/uk

1.4. Emergency telephone number

+44 (0)1344 858 000

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

Dangerous substances(67/548/EEC)/preparations(1999/45/EC) directive

Indication of danger

Highly flammable.

Dangerous to environment.

Harmful.

Sensitising

2.2. Label elements

Dangerous substances(67/548/EEC)/preparations(1999/45/EC) directive

3M Scotchkote Epoxy Coating EA4 2217 (Part B)**Symbols**

F	Highly flammable.
Xn	Harmful.
N	Dangerous to environment.

Contains:

Xylene; Butan-1-ol; 2,2'-iminodi(ethylamine)

Risk phrases

R11	Highly flammable.
R20/21/22	Harmful by inhalation, in contact with skin and if swallowed.
R41	Risk of serious damage to eyes.
R37/38	Irritating to respiratory system and skin.
R43	May cause sensitisation by skin contact.
R51/53	Toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

Safety phrases

S16	Keep away from sources of ignition - No Smoking.
S23C	Do not breathe vapour or spray.
S36/37/39B	Wear suitable protective clothing, gloves, and eye and face protection.
S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S61	Avoid release to the environment. Refer to special instructions/safety data sheets.

2.3. Other hazards

Persons previously sensitised to amines may develop a cross-sensitisation reaction to certain other amines.

SECTION 3: Composition/information on ingredients

Ingredient	CAS Nbr	EU Inventory	% by Wt	Classification
4,4'-(1-Methylethylidene)bisphenol, polymer with (chloromethyl)oxirane, diethylenetriamine-terminated	68610-56-0		30 - 40	N:R51/53 (Self Classified)
Xylene	1330-20-7	EINECS 215-535-7	15 - 30	Xn:R20-21; Xi:R38; R10 - Nota C (EU) Flam. Liq. 3, H226; Acute Tox. 4, H332; Acute Tox. 4, H312; Skin Irrit. 2, H315 - Nota C (CLP)
Butan-1-ol	71-36-3	EINECS 200-751-6	15 - 30	Xn:R22; Xi:R37-38-41; R10; R67 (EU) Flam. Liq. 3, H226; Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Dam. 1, H318; STOT SE 3, H336; STOT SE 3, H335 (CLP)
4-Methylpentan-2-one	108-10-1	EINECS 203-550-1	5 - 10	F:R11; Xn:R20; Xi:R36-37; R66 (EU) Flam. Liq. 2, H225; Acute Tox. 4, H332; Eye Irrit. 2, H319; STOT SE 3, H335 (CLP)
2,2'-iminodi(ethylamine)	111-40-0	EINECS 203-865-4	4 - 10	C:R34; Xn:R21-22; R43 (EU)

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				Acute Tox. 3, H311; Acute Tox. 4, H302; Skin Corr. 1B, H314; Skin Sens. 1, H317 (CLP)
4-Hydroxy-4-methylpentan-2-one	123-42-2	EINECS 204-626-7	1 - 5	Xi:R36 (EU) Eye Irrit. 2, H319 (CLP)
Ethylbenzene	100-41-4	EINECS 202-849-4	< 0.30	F:R11; Xn:R20 (EU) Flam. Liq. 2, H225; Acute Tox. 4, H332 (CLP)

Please see section 16 for the full text of any R phrases and H statements referred to in this section

Please refer to section 15 for the any applicable Notas that have been applied to the above components

For information on ingredient occupational exposure limits or PBT or vPvB status, see sections 8 and 12 of this SDS

SECTION 4: First aid measures**4.1. Description of first aid measures****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.

Skin contact

Immediately flush with large amounts of water for at least 15 minutes. Remove contaminated clothing. Get immediate medical attention. Wash clothing before reuse.

Inhalation

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

If swallowed

Do not induce vomiting. Get immediate medical attention.

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

See Section 11.1 Information on toxicological effects

4.3. Indication of any immediate medical attention and special treatment required

Not applicable

SECTION 5: Fire-fighting measures**5.1. Extinguishing media**

In case of fire: Use a fire fighting agent suitable for flammable liquids or gases such as dry chemical or carbon dioxide.

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**

Carbon monoxide.
Carbon dioxide.
Oxides of nitrogen.

Condition

During combustion.
During combustion.
During combustion.

5.3. Advice for fire-fighters

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Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Evacuate area. Ventilate the area with fresh air. 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

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

6.3. Methods and material for containment and cleaning up

Contain spill. Collect as much of the spilled material as possible using non-sparking tools. Cover spill area with a fire-extinguishing foam. An appropriate aqueous film forming foam (AFFF) is recommended. 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 toxic, corrosivity or flammability hazard. 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.

6.4. Reference to other sections

Refer to Section 8 and Section 13 for more information

SECTION 7: Handling and storage

7.1. Precautions for safe handling

For industrial or professional use only. Do not use in a confined area or areas with little or no air movement. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Use explosion-proof electrical/ventilating/lighting/equipment. 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. Vapours may travel long distances along the ground or floor to an ignition source and flash back.

7.2. Conditions for safe storage including any incompatibilities

Store in a well-ventilated place. Keep cool. Keep container tightly closed to prevent contamination with water or air. If contamination is suspected, do not reseal container. Store away from acids. Store away from oxidising agents.

7.3. Specific end use(s)

See information in Section 7.1 and 7.2 for handling and storage recommendations. See Section 8 for exposure controls and personal protection recommendations.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Ingredient	CAS Nbr	Agency	Limit type	Additional comments
Ethylbenzene	100-41-4	Health and	TWA:441 mg/m3(100	Skin Notation

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4-Methylpentan-2-one	108-10-1	Safety Comm. (UK) Health and Safety Comm. (UK)	ppm);STEL:552 mg/m ³ (125 ppm) TWA:208 mg/m ³ (50 ppm);STEL:416 mg/m ³ (100 ppm)	Skin Notation
2,2'-iminodi(ethylamine)	111-40-0	Health and Safety Comm. (UK)	TWA:4.3 mg/m ³ (1 ppm)	Skin Notation
4-Hydroxy-4-methylpentan-2-one	123-42-2	Health and Safety Comm. (UK)	TWA: 241 mg/m ³ (50 ppm); STEL: 362 mg/m ³ (75 ppm)	
Xylene	1330-20-7	Health and Safety Comm. (UK)	TWA:220 mg/m ³ (50 ppm);STEL:441 mg/m ³ (100 ppm)	Skin Notation
Butan-1-ol	71-36-3	Health and Safety Comm. (UK)	STEL:154 mg/m ³ (50 ppm)	Skin Notation

Health and Safety Comm. (UK) : UK Health and Safety Commission
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
ppm: parts per million
mg/m³: milligrams per cubic metre
CEIL: Ceiling

8.2. Exposure controls

8.2.1. Engineering controls

Use explosion-proof ventilation equipment. 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.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Wear eye/face protection.

The following eye protection(s) are recommended: Indirect vented goggles.

Skin/hand protection

Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials. Gloves made from the following material(s) are recommended: Butyl rubber. Neoprene.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Select one of the following approved respirators based on airborne concentration of contaminants and in accordance with regulations:

Half face piece or full face air-purifying respirator with organic vapour cartridges.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state

Liquid.

3M Scotchkote Epoxy Coating EA4 2217 (Part B)

Appearance/Odour	Strong, aromatic amine odour; Clear
pH	<i>No data available.</i>
Boiling point/boiling range	≥ 120 °C
Melting point	<i>Not applicable.</i>
Flammability (solid, gas)	Flammable Liquid: Category 2.
Explosive properties	Not classified
Oxidising properties	Not classified
Flash point	11 °C [<i>Test Method</i> :Closed Cup]
Autoignition temperature	≥ 450 °C
Flammable Limits(LEL)	0.9 %
Flammable Limits(UEL)	13 %
Vapour pressure	1,033.2 Pa [<i>@ 25 °C</i>] [<i>Test Method</i> :Estimated]
Relative density	0.96 [<i>Ref Std</i> :WATER=1]
Water solubility	0 %
Partition coefficient: n-octanol/water	<i>No data available.</i>
Evaporation rate	<i>No data available.</i>
Vapour density	<i>No data available.</i>
Viscosity	<i>No data available.</i>
Density	0.96 g/ml

9.2. Other information

Volatile organic compounds (VOC)	426 g/l [<i>Test Method</i> :Estimated] [<i>Details</i> :For Part A & Part B as mixed]
Volatile organic compounds (VOC)	465 g/l [<i>Details</i> :For Part A & Part B as mixed and thinned]
Percent volatile	58 %

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.

Temperatures above the boiling point.

10.5 Incompatible materials

Amines.

Combustibles.

Reaction with water, alcohols, and amines is not hazardous if container can vent to the atmosphere to prevent pressure buildup.

Strong acids.

Strong bases.

Strong oxidising agents.

10.6 Hazardous decomposition products

<u>Substance</u>	<u>Condition</u>
None known.	

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:

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.

Skin contact

Corrosive (skin burns): Signs/symptoms may include localised redness, swelling, itching, intense pain, blistering, ulceration, and tissue destruction. Allergic skin reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

Inhalation

Respiratory tract irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. Allergic respiratory reaction: Signs/symptoms may include difficulty breathing, wheezing, cough, and tightness of chest. May cause target organ effects after inhalation.

Ingestion

Chemical (aspiration) pneumonitis: Signs/symptoms may include coughing, gasping, choking, burning of the mouth, difficulty breathing, bluish coloured skin (cyanosis), and may be fatal. Gastrointestinal corrosion: Signs/symptoms may include severe mouth, throat and abdominal pain, nausea, vomiting, and diarrhea; blood in the faeces and/or vomitus may also be seen. May be harmful if swallowed.

May cause target organ effects after ingestion.

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. Persons previously sensitised to amines may develop a cross-sensitisation reaction to certain other amines. Auditory effects: Signs/symptoms may include hearing impairment, balance dysfunction and ringing in the ears.

Prolonged or repeated exposure may cause:

Neurological effects: Signs/symptoms may include personality changes, lack of coordination, sensory loss, tingling or numbness of the extremities, weakness, tremors, and changes in blood pressure and heart rate.

Carcinogenicity:

Contains a chemical or chemicals which can cause cancer.

Additional information:

Persons previously sensitised to amines may develop a cross-sensitisation reaction to certain other amines.

Toxicological Data

3M Scotchkote Epoxy Coating EA4 2217 (Part B)**Acute Toxicity**

Name	Route	Species	Value	UN GHS Classification
Overall product	Ingestion		No test data available; calculated ATE3,001 mg/kg	Category5 (0% unknown)
4,4'-(1-Methylethylidene)bisphenol, polymer with (chloromethyl)oxirane, diethylenetriamine-terminated			No data available	
Butan-1-ol	Dermal	Rabbit	LD50 3,402 mg/kg	Category5
Butan-1-ol	Inhalation-Vapor (4 hours)	Rat	LC50 > 24 mg/l	Not classified
Butan-1-ol	Ingestion	Rat	LD50 2,290 mg/kg	Category5
Xylene	Dermal	Rabbit	LD50 > 4,300 mg/kg	Category5
Xylene	Inhalation-Vapor (4 hours)	Rat	LC50 28 mg/l	Category5
Xylene	Ingestion	Rat	LD50 3,523 mg/kg	Category5
4-Methylpentan-2-one	Dermal	Rabbit	LD50 > 16,000 mg/kg	Not classified
4-Methylpentan-2-one	Ingestion	Rat	LD50 3,038 mg/kg	Category5
2,2'-iminodi(ethylamine)	Dermal	Rabbit	LD50 950 mg/kg	Category3
2,2'-iminodi(ethylamine)	Ingestion	Rat	LD50 819 mg/kg	Category4
4-Hydroxy-4-methylpentan-2-one	Dermal	Rabbit	LD50 13,645 mg/kg	Not classified
4-Hydroxy-4-methylpentan-2-one	Ingestion	Rat	LD50 4,000 mg/kg	Category5
Ethylbenzene	Dermal	Rabbit	LD50 15,433 mg/kg	Not classified
Ethylbenzene	Inhalation-Vapor (4 hours)	Rat	LC50 17 mg/l	Category4
Ethylbenzene	Ingestion	Rat	LD50 4,769 mg/kg	Category5

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value	UN GHS Classification
Overall product		No test data available; calculated to be corrosive	Category 1B
4,4'-(1-Methylethylidene)bisphenol, polymer with (chloromethyl)oxirane, diethylenetriamine-terminated		No data available	
Butan-1-ol		Mild irritant	Category 3
Xylene		Mild irritant	Category 3
4-Methylpentan-2-one		Mild irritant	Category 3
2,2'-iminodi(ethylamine)		Corrosive	Category 1B
4-Hydroxy-4-methylpentan-2-one		Minimal irritation	Not classified
Ethylbenzene		Mild irritant	Category 3

Serious Eye Damage/Irritation

Name	Species	Value	UN GHS Classification
Overall product		No test data available; calculated to be corrosive	Category 1
4,4'-(1-Methylethylidene)bisphenol, polymer with (chloromethyl)oxirane, diethylenetriamine-terminated		No data available	
Butan-1-ol		Severe irritant	Category 2A
Xylene		Mild irritant	Not classified
4-Methylpentan-2-one		Moderate irritant	Category 2B
2,2'-iminodi(ethylamine)		Corrosive	Category 1
4-Hydroxy-4-methylpentan-2-one		Severe irritant	Category 2A
Ethylbenzene		Moderate irritant	Category 2B

Skin Sensitisation

Name	Species	Value	UN GHS Classification
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Overall product		No test data available.	Category 1 based on component data
4,4'-(1-Methylethylidene)bisphenol, polymer with (chloromethyl)oxirane, diethylenetriamine-terminated		No data available	
Butan-1-ol		Not sensitizing	Not classified
Xylene		No data available	
4-Methylpentan-2-one		Not sensitizing	Not classified
2,2'-iminodi(ethylamine)		Sensitising	Category 1
4-Hydroxy-4-methylpentan-2-one		No data available	
Ethylbenzene		Not sensitizing	Not classified

Respiratory Sensitisation

Name	Species	Value	UN GHS Classification
Overall product		No test data available.	Category 1
4,4'-(1-Methylethylidene)bisphenol, polymer with (chloromethyl)oxirane, diethylenetriamine-terminated		No data available	
Butan-1-ol		No data available	
Xylene		No data available	
4-Methylpentan-2-one		No data available	
2,2'-iminodi(ethylamine)		Sensitising	Category 1
4-Hydroxy-4-methylpentan-2-one		No data available	
Ethylbenzene		No data available	

Germ Cell Mutagenicity

Name	Route	Value	UN GHS Classification
Overall product		No data available	Overall Germ Cell Mutagenicity classification Not classified
Overall product		No test data available.	
4,4'-(1-Methylethylidene)bisphenol, polymer with (chloromethyl)oxirane, diethylenetriamine-terminated		No data available	
Butan-1-ol	Ingestion	Not mutagenic	Not classified
Butan-1-ol	In Vitro	Some positive data exist, but the data are not sufficient for classification	Not classified
Xylene	In Vitro	Not mutagenic	Not classified
Xylene	In vivo	Not mutagenic	Not classified
4-Methylpentan-2-one	In vivo	Some positive data exist, but the data are not sufficient for classification	Not classified
2,2'-iminodi(ethylamine)	In Vitro	Not mutagenic	Not classified
4-Hydroxy-4-methylpentan-2-one	In vivo	Some positive data exist, but the data are not sufficient for classification	Not classified
Ethylbenzene	In Vitro	Some positive data exist, but the data are not sufficient for classification	Not classified

Carcinogenicity

Name	Route	Species	Value	UN GHS Classification
Overall product			No test data available.	Category 2 based on component data
4,4'-(1-Methylethylidene)bisphenol, polymer with (chloromethyl)oxirane, diethylenetriamine-terminated			No data available	
Butan-1-ol			No data available	
Xylene	Dermal		Not carcinogenic	Not classified
Xylene	Ingestion		Not carcinogenic	Not classified

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Xylene	Inhalation		Some positive data exist, but the data are not sufficient for classification	Not classified
4-Methylpentan-2-one	Inhalation		Some positive data exist, but the data are not sufficient for classification	Not classified
2,2'-iminodi(ethylamine)	Dermal		Not carcinogenic	Not classified
4-Hydroxy-4-methylpentan-2-one			No data available	
Ethylbenzene	Inhalation		Carcinogenic.	Category 2

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration	UN GHS Classification
Overall product		No test data available.				Not classified based on component data
4,4'-(1-Methylethylidene)bis phenol, polymer with (chloromethyl)oxirane, diethylenetriamine-terminated		No data available				
Butan-1-ol	Ingestion	Not toxic to reproduction and/or development		NOAEL 5,000 mg/kg/day		
Butan-1-ol	Inhalation	Some positive reproductive/developmental data exist, but the data are not sufficient for classification		NOEL 3,500 ppm		
Xylene	Ingestion	Some positive reproductive/developmental data exist, but the data are not sufficient for classification		LOAEL 2,060 mg/kg/day		
Xylene	Inhalation	Some positive reproductive/developmental data exist, but the data are not sufficient for classification		NOAEL N/A		
4-Methylpentan-2-one	Ingestion	Some positive reproductive/developmental data exist, but the data are not sufficient for classification		NOEL 250 mg/kg/day		
4-Methylpentan-2-one	Inhalation	Some positive reproductive/developmental data exist, but the data are not sufficient for classification		NOEL 0.41 mg/l		
2,2'-iminodi(ethylamine)	Ingestion	Some positive reproductive/developmental data exist, but the data are not sufficient for classification		NOEL 30 mg/kg/day		

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		mental data exist, but the data are not sufficient for classification				
4-Hydroxy-4-methylpentan-2-one	Ingestion	Some positive reproductive/developmental data exist, but the data are not sufficient for classification		NOEL 300 mg/kg/day		
Ethylbenzene	Inhalation	Some positive reproductive/developmental data exist, but the data are not sufficient for classification		LOEL 0.43 mg/l		

Lactation

Name	Route	Species	Value	UN GHS Classification
Overall product			No test data available.	Not classified based on component data
Xylene	Ingestion		Does not cause effects on or via lactation	Not classified

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration	UN GHS Classification
Overall product			No test data available.				Category 1 based on component data
4,4'-(1-Methylethylidene)bisphenol, polymer with (chloromethyl)oxirane, diethylenetriamine-terminated			No data available				
Butan-1-ol	Inhalation	central nervous system depression	May cause drowsiness or dizziness		NOAEL N/A		Category 3
Butan-1-ol	Inhalation	respiratory irritation	May cause respiratory irritation		Irritation Positive		Category 3
Butan-1-ol	Ingestion	central nervous system depression	May cause drowsiness or dizziness		NOAEL N/A		Category 3
Xylene	Inhalation	auditory system	Causes damage to organs		LOAEL 6.3 mg/l		Category 1
Xylene	Inhalation	central nervous system depression	May cause drowsiness or dizziness		LOAEL 0.43 mg/l		Category 3

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Xylene	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		Irritation Positive		Not classified
Xylene	Inhalation	liver	Some positive data exist, but the data are not sufficient for classification		NOEL N/A		Not classified
Xylene	Inhalation	eyes	Some positive data exist, but the data are not sufficient for classification		NOEL 3.5 mg/l		Not classified
Xylene	Inhalation	nervous system	All data are negative		NOAEL 0.65 mg/l		Not classified
Xylene	Ingestion	central nervous system depression	May cause drowsiness or dizziness		NOAEL N/A		Category 3
Xylene	Ingestion	eyes	Some positive data exist, but the data are not sufficient for classification		NOEL 125 mg/kg		Not classified
4-Methylpentan-2-one	Inhalation	central nervous system depression	May cause drowsiness or dizziness		NOAEL 10 mg/m3		Category 3
4-Methylpentan-2-one	Inhalation	respiratory irritation	May cause respiratory irritation		Irritation Positive		Category 3
4-Methylpentan-2-one	Inhalation	vascular system	Some positive data exist, but the data are not sufficient for classification		NOEL N/A		Not classified
4-Methylpentan-2-one	Ingestion	central nervous system depression	May cause drowsiness or dizziness		LOAEL 900 mg/kg/day		Category 3
4-Methylpentan-2-one	Ocular	lacrimation	Some positive data exist, but the data are not sufficient for classification		LOAEL 16,800 ppm		Not classified
2,2'-iminodi(ethyl amine)	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		Irritation Positive		Not classified
4-Hydroxy-4-methylpentan-2-one	Inhalation	central nervous system depression	May cause drowsiness or dizziness		NOAEL NA		Category 3
4-Hydroxy-4-methylpentan-2-one	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		Irritation Positive		Not classified

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4-Hydroxy-4-methylpentan-2-one	Ingestion	central nervous system depression	May cause drowsiness or dizziness		NOAEL NA		Category 3
4-Hydroxy-4-methylpentan-2-one	Ingestion	blood liver	Some positive data exist, but the data are not sufficient for classification		LOAEL 1,882 mg/kg		Not classified
Ethylbenzene	Inhalation	central nervous system depression	May cause drowsiness or dizziness		LOAEL 0.43 mg/l		Category 3
Ethylbenzene	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		Irritation Positive		Not classified

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration	UN GHS Classification
Overall product			No test data available.				Category 1 based on component data
4,4'-(1-Methylethylidene)bisphenol, polymer with (chloromethyl)oxirane, diethylenetriamine-terminated			No data available				
Butan-1-ol	Inhalation	auditory system	Some positive data exist, but the data are not sufficient for classification		LOAEL 80 ppm		Not classified
Butan-1-ol	Inhalation	blood	Some positive data exist, but the data are not sufficient for classification		LOEL 50 ppm		Not classified
Butan-1-ol	Inhalation	liver kidney and/or bladder respiratory system	Some positive data exist, but the data are not sufficient for classification		LOEL 100 ppm		Not classified
Butan-1-ol	Inhalation	nervous system	All data are negative		NOAEL 3,000 ppm		Not classified
Butan-1-ol	Ingestion	blood	Some positive data exist, but the data are not sufficient for classification		NOEL 30 mg/kg/day		Not classified
Butan-1-ol	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification		LOEL 800 mg/kg/day		Not classified
Xylene	Inhalation	nervous system	Causes damage to organs through		LOAEL 0.4 mg/l		Category 1

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			prolonged or repeated exposure				
Xylene	Inhalation	auditory system	May cause damage to organs though prolonged or repeated exposure		LOAEL 7.8 mg/l		Category 2
Xylene	Inhalation	liver	Some positive data exist, but the data are not sufficient for classification		NOEL N/A		Not classified
Xylene	Inhalation	heart endocrine system hematopoietic system muscles kidney and/or bladder respiratory system	All data are negative		NOAEL 3.5 mg/l		Not classified
Xylene	Ingestion	auditory system	Some positive data exist, but the data are not sufficient for classification		LOEL 900 mg/kg/day		Not classified
Xylene	Ingestion	liver kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification		NOEL N/A		Not classified
Xylene	Ingestion	heart skin endocrine system bone, teeth, nails, and/or hair hematopoietic system immune system nervous system respiratory system	All data are negative		NOAEL 1,000 mg/kg/day		Not classified
4-Methylpentan-2-one	Inhalation	heart	Some positive data exist, but the data are not sufficient for classification		LOEL 200 ppm		Not classified
4-Methylpentan-2-one	Inhalation	liver kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification		LOEL 0.41 mg/l		Not classified
4-Methylpentan-2-one	Inhalation	endocrine system hematopoietic system nervous system	All data are negative		NOAEL 0.41 mg/l		Not classified
4-Methylpentan-2-one	Inhalation	respiratory system	All data are negative		NOAEL 4.1 mg/l		Not classified
4-	Ingestion	endocrine	Some positive data		NOEL 250		Not classified

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Methylpentan-2-one		system hematopoietic system liver	exist, but the data are not sufficient for classification		mg/kg/day		
4-Methylpentan-2-one	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification		NOEL 50 mg/kg/day		Not classified
4-Methylpentan-2-one	Ingestion	heart immune system muscles nervous system respiratory system	All data are negative		NOAEL 1,040 mg/kg/day		Not classified
2,2'-iminodi(ethylamine)	Ingestion	endocrine system	Some positive data exist, but the data are not sufficient for classification		NOEL 620 mg/kg/day		Not classified
2,2'-iminodi(ethylamine)	Ingestion	liver kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification		NOEL 80 mg/kg/day		Not classified
4-Hydroxy-4-methylpentan-2-one	Inhalation	blood	Some positive data exist, but the data are not sufficient for classification		NOEL 1.035 mg/l		Not classified
4-Hydroxy-4-methylpentan-2-one	Inhalation	liver	Some positive data exist, but the data are not sufficient for classification		NOEL 0.232 mg/l		Not classified
4-Hydroxy-4-methylpentan-2-one	Inhalation	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification		NOEL 1.035 mg/l		Not classified
4-Hydroxy-4-methylpentan-2-one	Ingestion	endocrine system blood liver	Some positive data exist, but the data are not sufficient for classification		NOEL 300 mg/kg/day		Not classified
4-Hydroxy-4-methylpentan-2-one	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification		NOEL 100 mg/kg/day		Not classified
Ethylbenzene	Inhalation	liver kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification		NOAEL 1.1 mg/l		Not classified
Ethylbenzene	Inhalation	auditory system	Some positive data exist, but the data are not sufficient for classification		NOEL 1.3 mg/l		Not classified
Ethylbenzene	Inhalation	endocrine system	Some positive data exist, but the data are not sufficient for classification		NOEL 0.32 mg/l		Not classified
Ethylbenzene	Inhalation	hematopoietic system	Some positive data exist, but the data are not sufficient for classification		NOEL 1.6 mg/l		Not classified
Ethylbenzene	Inhalation	heart	All data are		NOAEL		Not classified

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			negative		3.2 mg/l		
Ethylbenzene	Inhalation	bone, teeth, nails, and/or hair	All data are negative		NOAEL 4.2 mg/l		Not classified
Ethylbenzene	Inhalation	immune system	All data are negative		NOAEL 3.2 mg/l		Not classified
Ethylbenzene	Inhalation	muscles	All data are negative		NOAEL 4.2 mg/l		Not classified
Ethylbenzene	Inhalation	respiratory system	All data are negative		NOAEL 3.2 mg/l		Not classified
Ethylbenzene	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification		NOEL 136 mg/kg/day		Not classified
Ethylbenzene	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification		NOEL 136 mg/kg		Not classified

Aspiration Hazard

Name	Value	UN GHS Classification
Overall product	No test data available.	Category 1
4,4'-(1-Methylethylidene)bisphenol, polymer with (chloromethyl)oxirane, diethylenetriamine-terminated	Not an aspiration hazard	Not classified
Butan-1-ol	Some positive data exist, but the data are not sufficient for classification	Not classified
Xylene	Aspiration hazard	Category 1
4-Methylpentan-2-one	Some positive data exist, but the data are not sufficient for classification	Not classified
2,2'-iminodi(ethylamine)	Not an aspiration hazard	Not classified
4-Hydroxy-4-methylpentan-2-one	Not an aspiration hazard	Not classified
Ethylbenzene	Aspiration hazard	Category 1

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 3: Harmful to aquatic life.

Chronic aquatic hazard:

Not chronically toxic to aquatic life by GHS criteria.

No product test data available.

No component test data available.

12.2. Persistence and degradability

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No test data available.

12.3 : Bioaccumulative potential

No test data available.

12.4. Mobility in soil

Please contact manufacturer for more details

12.5. Results of the PBT and vPvB assessment

No information available at this time, contact manufacturer for more details

12.6. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Dispose of contents/ container in accordance with the local/regional/national/international regulations

Incinerate in a permitted waste incineration facility. ****As a disposal alternative..... - As a disposal alternative,**** 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.

The coding of a waste stream is based on the application of the product by the consumer. Since this is out of the control of 3M, no waste code(s) for products after use will be provided. Please refer to the European Waste Code (EWC - 2000/532/EC and amendments) to assign the correct waste code to your waste stream. Ensure national and/or regional regulations are complied with and always use a licensed waste contractor.

EU waste code (product as sold)

08 01 11* Waste paint and varnish containing organic solvents or other dangerous substances

SECTION 14: Transportation information

GR-2001-0413-5

ADR/RID: UN1263, PAINT RELATED MATERIAL, 3., II, (D/E), ADR Classification Code: F1.

IMDG-CODE: UN1263, PAINT RELATED MATERIAL, 3, II, EMS: FE,SE.

ICAO/IATA: FORBIDDEN: PACKAGE SIZE EXCEEDS IATA QUANTITY LIMITATIONS

GR-2001-0414-3, GR-2001-0416-8

ADR/RID: UN1263, PAINT RELATED MATERIAL, LIMITED QUANTITY, 3., II, (--), ADR Classification Code: F1.

IMDG-CODE: UN1263, PAINT RELATED MATERIAL, 3, II, LIMITED QUANTITY, EMS: FE,SE.

ICAO/IATA: UN1263, PAINT RELATED MATERIAL, 3., II.

SECTION 15: Regulatory information

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

Carcinogenicity

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<u>Ingredient</u>	<u>CAS Nbr</u>	<u>Classification</u>	<u>Regulation</u>
Ethylbenzene	100-41-4	Grp. 2B: Possible human carc.	International Agency for Research on Cancer
Xylene	1330-20-7	Gr. 3: Not classifiable	International Agency for Research on Cancer

Global inventory status

Contact 3M for more information. The components of this material are in compliance with the provisions of the Korean Toxic Chemical Control Law. Certain restrictions may apply. Contact the selling division for additional 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 material are in compliance with the provisions of Philippines RA 6969 requirements. 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. The components of this product are in compliance with the chemical notification requirements of TSCA.

15.2. Chemical Safety Assessment

Not applicable

SECTION 16: Other information

List of relevant H statements

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.

List of relevant R-phrases

R10	Flammable.
R11	Highly flammable.
R20	Harmful by inhalation.
R21	Harmful in contact with skin.
R22	Harmful if swallowed.
R34	Causes burns.
R36	Irritating to eyes.
R37	Irritating to respiratory system.
R38	Irritating to skin.
R41	Risk of serious damage to eyes.
R43	May cause sensitisation by skin contact.
R51/53	Toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.
R66	Repeated exposure may cause skin dryness or cracking.
R67	Vapours may cause drowsiness and dizziness.

Revision information:

Revision Changes:

Risk phrase was modified.
Safety phrase was modified.
Section 2: Symbol was modified.
Section 2: Label ingredient information was modified.
Section 3: Composition/ Information of ingredients table was modified.
Section 2: Indication of danger information was modified.
Section 12: Acute aquatic hazard information was modified.
Section 10: Conditions to avoid physical property was modified.
Section 2: Other hazards phrase was modified.
Section 16: Regulations – Inventories – EU ONLY was modified.
Section 8: Occupational exposure limit table was modified.
Aspiration Hazard Table was modified.
Section 11: Acute Toxicity table was modified.
Carcinogenicity Table was modified.
Serious Eye Damage/Irritation Table was modified.
Germ Cell Mutagenicity Table was modified.
Skin Sensitisation Table was modified.
Respiratory Sensitisation Table was modified.
Reproductive Toxicity Table was modified.
Skin Corrosion/Irritation Table was modified.
Target Organs - Repeated Table was modified.
Target Organs - Single Table was modified.
Section 11: Health Effects - Skin information was modified.
Section 11: Health Effects - Inhalation information was modified.
Section 11: Health Effects - Other information was modified.
Section 6: Accidental release personal information was modified.
Section 6: Accidental release environmental information was modified.
Section 6: Accidental release clean-up information was modified.
Section 7: Precautions safe handling information was modified.
Section 7: Conditions safe storage was modified.
Section 8: Personal Protection - Eye information was modified.
Section 8: Personal Protection - Skin/hand information was modified.
Section 13: Standard Phrase Category Waste GHS was modified.
Section 11: Lactation table heading was added.
Lactation Table was added.
Section 11: Lactation table - Name heading was added.
Section 11: Lactation table - Route heading was added.
Section 11: Lactation table - Species heading was added.
Section 11: Lactation table - UN GHS Classification heading was added.
Section 11: Lactation table - Value heading was added.
Section 9: Property description for required properties was deleted.

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 United Kingdom MSDSs are available at www.3M.com/uk