



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 EA9 (Part B)

Product Identification Numbers

GR-2000-9949-1 GR-2001-0257-6

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.
Telephone: +44 (0)1344 858 000
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; F; R11
Harmful; Xn; R20/21/22
Irritant; Xi; R41
Irritant; Xi; R37/38
Sensitizing; R43

For full text of R phrases, see Section 16.

2.2. Label elements

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

Symbol(s)



Highly
Flammable



Harmful

Contains:

Butan-1-ol; Diethylenetriamine; Xylene

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.

Safety phrases

S16	Keep away from sources of ignition - No Smoking.
S23C	Do not breathe vapour or spray.
S51	Use only in well ventilated areas.
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.

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
Non-hazardous ingredients	Mixture		25 - 35	
4-Methylpentan-2-one	108-10-1	EINECS 203-550-1	15 - 25	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; EUH066 (CLP)
Xylene	1330-20-7	EINECS 215-535-7	15 - 25	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	10 - 25	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,

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				H336; STOT SE 3, H335 (CLP)
Diethylenetriamine	111-40-0	EINECS 203-865-4	1 - 10	C:R34; Xn:R21-22; R43 (EU) R52/53 (Self Classified) Acute Tox. 4, H312; Acute Tox. 4, H302; Skin Corr. 1B, H314; Skin Sens. 1, H317 (CLP)
2,4,6-Tris(dimethylaminomethyl)phenol	90-72-2	EINECS 202-013-9	1 - 5	Xn:R22; Xi:R36-38 (EU) Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2, H319 (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	< 1	F:R11; Xn:R20 (EU) R52 (Self Classified) 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****Inhalation**

Remove person to fresh air. If you feel unwell, 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.

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. 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 such as dry

5.2. Special hazards arising from the substance or mixture

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Closed containers exposed to heat from fire may build pressure and explode.

Hazardous Decomposition or By-Products

<u>Substance</u>	<u>Condition</u>
Carbon monoxide.	During combustion.
Carbon dioxide.	During combustion.

5.3. Advice 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.

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. 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. 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 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.

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 with minimal air exchange. 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. Do not breathe dust/fume/gas/mist/vapours/spray. Avoid breathing 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. 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. 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 container tightly closed. Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store away from acids. Store away from strong bases. Store away from oxidising agents.

7.3. Specific end use(s)

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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 Safety Comm. (UK)	TWA:441 mg/m ³ (100 ppm);STEL:552 mg/m ³ (125 ppm)	Skin Notation
4-Methylpentan-2-one	108-10-1	Health and Safety Comm. (UK)	TWA:208 mg/m ³ (50 ppm);STEL:416 mg/m ³ (100 ppm)	Skin Notation
Diethylenetriamine	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

CEIL: Ceiling

Biological limit values

Ingredient	CAS Nbr	Agency	Determinant	Biological Specimen	Sampling Time	Value	Additional comments
4-Methylpentan-2-one	108-10-1	UK EH40 BMGVs	4-Methyl pentan-2-one	Urine	EOS	20 umol/L	
Xylene	1330-20-7	UK EH40 BMGVs	Methyl hippuric acid	Creatinine in urine	EOS	650 mmol/mol	

UK EH40 BMGVs : UK. EH40 Biological Monitoring Guidance Values (BMGVs)

EOS: End of shift.

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

Wear protective gloves and eye/face protection. Wear 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:

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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. Wear protective gloves, protective clothing, and eye/face protection. Wear protective gloves.

Gloves made from the following material(s) are recommended: Polymer laminate

Select and use body protection to prevent contact based on the results of an exposure assessment. The following protective clothing material(s) are recommended: Apron - polymer laminate

Rubber boots.

Respiratory protection

In case of inadequate ventilation wear 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:

Full facepiece air-purifying respirator suitable for organic vapours

Full facepiece air-purifying respirator suitable for organic vapours and particulates

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.
Appearance/Odour	Pungent solvent odour; Clear amber colour
Odour threshold	<i>No data available.</i>
pH	<i>Not applicable.</i>
Boiling point/boiling range	≥ 100 °C
Melting point	<i>Not applicable.</i>
Flammability (solid, gas)	Not applicable.
Explosive properties	Not classified
Oxidising properties	Not classified
Flash point	≥ 14 °C [<i>Test Method: Closed Cup</i>]
Autoignition temperature	≥ 400 °C
Flammable Limits(LEL)	1 % volume
Flammable Limits(UEL)	13 % volume
Vapour pressure	1,599.9 Pa [<i>@ 20 °C</i>]
Relative density	0.93 [<i>Ref Std: WATER=1</i>]
Water solubility	Negligible
Solubility- non-water	<i>No data available.</i>
Partition coefficient: n-octanol/water	<i>No data available.</i>
Evaporation rate	<i>No data available.</i>
Vapour density	<i>No data available.</i>
Decomposition temperature	<i>No data available.</i>
Viscosity	0.45 Pa-s
Density	0.93 g/ml

9.2. Other information

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Volatile organic compounds (VOC)	606 g/l [<i>Test Method</i> :Estimated] [<i>Details</i> :EU Definition (Part B)]
Percent volatile	65.2 % weight

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

Sparks and/or flames.

10.5 Incompatible materials

Amines.
Combustibles.
Strong acids.
Strong bases.
Strong oxidising agents.

10.6 Hazardous decomposition products

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

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 11 are based on UN GHS calculation rules and classifications derived from 3M assessments.

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

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.

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,

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and itching.

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 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.

Target Organ Effects:

Single exposure may cause:

Auditory effects: Signs/symptoms may include hearing impairment, balance dysfunction and ringing in the ears. Central nervous system (CNS) depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

Prolonged or repeated exposure may cause:

Auditory effects: Signs/symptoms may include hearing impairment, balance dysfunction and ringing in the ears.

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

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	Ingestion		No data available; calculated ATE2,000 - 5,000 mg/kg
4-Methylpentan-2-one	Dermal	Rabbit	LD50 > 16,000 mg/kg
4-Methylpentan-2-one	Inhalation-Vapor (4 hours)	Rat	LC50 >8.2, <16.4 mg/l
4-Methylpentan-2-one	Ingestion	Rat	LD50 3,038 mg/kg
Butan-1-ol	Dermal	Rabbit	LD50 3,402 mg/kg
Butan-1-ol	Inhalation-Vapor (4 hours)	Rat	LC50 24 mg/l
Butan-1-ol	Ingestion	Rat	LD50 2,290 mg/kg
Xylene	Dermal	Rabbit	LD50 > 4,200 mg/kg
Xylene	Inhalation-Vapor (4 hours)	Rat	LC50 29 mg/l
Xylene	Ingestion	Rat	LD50 3,523 mg/kg
Diethylenetriamine	Dermal	Rabbit	LD50 1,045 mg/kg
Diethylenetriamine	Ingestion	Rat	LD50 819 mg/kg
4-Hydroxy-4-methylpentan-2-one	Dermal	Rabbit	LD50 13,645 mg/kg
4-Hydroxy-4-methylpentan-2-one	Ingestion	Rat	LD50 4,000 mg/kg
2,4,6-Tris(dimethylaminomethyl)phenol	Dermal	Rat	LD50 1,280 mg/kg
2,4,6-Tris(dimethylaminomethyl)phenol	Ingestion	Rat	LD50 1,000 mg/kg
Ethylbenzene	Dermal	Rabbit	LD50 15,433 mg/kg
Ethylbenzene	Inhalation-	Rat	LC50 17.4 mg/l

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	Vapor (4 hours)		
Ethylbenzene	Ingestion	Rat	LD50 4,769 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
4-Methylpentan-2-one	Rabbit	Mild irritant
Butan-1-ol	Rabbit	Mild irritant
Xylene	Rabbit	Mild irritant
Diethylenetriamine	Rabbit	Corrosive
4-Hydroxy-4-methylpentan-2-one	Rabbit	No significant irritation
2,4,6-Tris(dimethylaminomethyl)phenol	Rabbit	Corrosive
Ethylbenzene	Rabbit	Mild irritant

Serious Eye Damage/Irritation

Name	Species	Value
4-Methylpentan-2-one	Rabbit	Mild irritant
Butan-1-ol	Rabbit	Severe irritant
Xylene	Rabbit	Mild irritant
Diethylenetriamine	Rabbit	Corrosive
4-Hydroxy-4-methylpentan-2-one	Rabbit	Severe irritant
2,4,6-Tris(dimethylaminomethyl)phenol	Rabbit	Corrosive
Ethylbenzene	Rabbit	Moderate irritant

Skin Sensitisation

Name	Species	Value
4-Methylpentan-2-one	Guinea pig	Not sensitizing
Butan-1-ol	Human	Not sensitizing
Diethylenetriamine	Guinea pig	Sensitising
2,4,6-Tris(dimethylaminomethyl)phenol	Guinea pig	Some positive data exist, but the data are not sufficient for classification
Ethylbenzene	Human	Not sensitizing

Respiratory Sensitisation

Name	Species	Value
Diethylenetriamine	Human	Sensitising

Germ Cell Mutagenicity

Name	Route	Value
4-Methylpentan-2-one	In Vitro	Not mutagenic
Butan-1-ol	In vivo	Not mutagenic
Butan-1-ol	In Vitro	Some positive data exist, but the data are not sufficient for classification
Xylene	In Vitro	Not mutagenic
Xylene	In vivo	Not mutagenic
Diethylenetriamine	In Vitro	Not mutagenic
4-Hydroxy-4-methylpentan-2-one	In Vitro	Some positive data exist, but the data are not sufficient for classification
2,4,6-Tris(dimethylaminomethyl)phenol	In Vitro	Not mutagenic
Ethylbenzene	In vivo	Not mutagenic
Ethylbenzene	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
4-Methylpentan-2-one	Inhalation	Multiple animal species	Carcinogenic.
Xylene	Dermal	Rat	Not carcinogenic
Xylene	Ingestion	Multiple animal	Not carcinogenic

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		species	
Xylene	Inhalation	Human	Some positive data exist, but the data are not sufficient for classification
Diethylenetriamine	Dermal	Multiple animal species	Not carcinogenic
Ethylbenzene	Inhalation	Multiple animal species	Carcinogenic.

Reproductive Toxicity
Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
4-Methylpentan-2-one	Inhalation	Not toxic to female reproduction	Multiple animal species	NOAEL 8.2 mg/l	2 generation
4-Methylpentan-2-one	Ingestion	Some positive male reproductive data exist, but the data are not sufficient for classification	Rat	NOAEL 1,000 mg/kg/day	13 weeks
4-Methylpentan-2-one	Inhalation	Some positive male reproductive data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL 8.2 mg/l	2 generation
4-Methylpentan-2-one	Inhalation	Some positive developmental data exist, but the data are not sufficient for classification	Mouse	NOAEL 12.3 mg/l	during organogenesis
Butan-1-ol	Ingestion	Not toxic to female reproduction	Rat	NOAEL 5,000 mg/kg/day	prematuring & during gestation
Butan-1-ol	Ingestion	Not toxic to male reproduction	Rat	NOAEL 500 mg/kg/day	4 days
Butan-1-ol	Inhalation	Not toxic to male reproduction	Rat	NOAEL 18 mg/l	6 weeks
Butan-1-ol	Inhalation	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 10.6 mg/l	during gestation
Xylene	Ingestion	Not toxic to female reproduction	Mouse	NOAEL 1,000 mg/kg/day	103 weeks
Xylene	Ingestion	Not toxic to male reproduction	Mouse	NOAEL 1,000 mg/kg/day	103 weeks
Xylene	Inhalation	Some positive female reproductive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
Xylene	Ingestion	Some positive developmental data exist, but the data are not sufficient for classification	Mouse	NOAEL Not available	during organogenesis
Xylene	Inhalation	Some positive developmental data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL Not available	during gestation
Diethylenetriamine	Ingestion	Not toxic to male reproduction	Rat	NOAEL 300 mg/kg/day	28 days
Diethylenetriamine	Ingestion	Not toxic to development	Rat	NOAEL 300 mg/kg/day	prematuring & during gestation
Diethylenetriamine	Ingestion	Some positive female reproductive data exist, but the data are not sufficient for classification	Rat	NOAEL 30 mg/kg/day	prematuring & during gestation
4-Hydroxy-4-methylpentan-2-one	Ingestion	Some positive female reproductive data exist, but the data are not sufficient for classification	Rat	NOAEL 300 mg/kg/day	prematuring & during gestation
4-Hydroxy-4-methylpentan-2-one	Ingestion	Some positive male reproductive data exist, but the data are not sufficient for classification	Rat	NOAEL 300 mg/kg/day	prematuring & during gestation
4-Hydroxy-4-methylpentan-2-one	Ingestion	Some positive developmental data exist, but the data are not sufficient for	Rat	NOAEL 300 mg/kg/day	prematuring & during

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Ethylbenzene	Inhalation	classification Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 4.3 mg/l	gestation premating & during gestation
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Lactation

Name	Route	Species	Value
Xylene	Ingestion	Mouse	Does not cause effects on or via lactation

Target Organ(s)
Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
4-Methylpentan-2-one	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	LOAEL 0.10 mg/l	2 hours
4-Methylpentan-2-one	Inhalation	respiratory irritation	May cause respiratory irritation	Human	NOAEL 0.9 mg/l	7 minutes
4-Methylpentan-2-one	Inhalation	vascular system	Some positive data exist, but the data are not sufficient for classification	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
Butan-1-ol	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Butan-1-ol	Inhalation	respiratory irritation	May cause respiratory irritation	official classification	NOAEL Not available	
Butan-1-ol	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Xylene	Inhalation	auditory system	Causes damage to organs	Rat	LOAEL 6.3 mg/l	8 hours
Xylene	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Xylene	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
Xylene	Inhalation	eyes	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 3.5 mg/l	not available
Xylene	Inhalation	liver	Some positive data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL Not available	
Xylene	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Multiple animal species	NOAEL Not available	
Xylene	Ingestion	eyes	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 250 mg/kg	not applicable
Diethylenetriamine	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
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	Some positive data exist, but the data are not sufficient for classification	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	not applicable
4-Hydroxy-4-methylpentan-2-one	Ingestion	liver	Some positive data exist, but the data are not sufficient for	Rat	NOAEL 1,882 mg/kg	not applicable

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			classification			
2,4,6-Tris(dimethylaminomethyl) phenol	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
Ethylbenzene	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Ethylbenzene	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
4-Methylpentan-2-one	Inhalation	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 0.41 mg/l	13 weeks
4-Methylpentan-2-one	Inhalation	heart	Some positive data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL 0.8 mg/l	2 weeks
4-Methylpentan-2-one	Inhalation	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL 0.4 mg/l	90 days
4-Methylpentan-2-one	Inhalation	respiratory system	All data are negative	Multiple animal species	NOAEL 4.1 mg/l	14 weeks
4-Methylpentan-2-one	Inhalation	endocrine system hematopoietic system	All data are negative	Multiple animal species	NOAEL 0.41 mg/l	90 days
4-Methylpentan-2-one	Inhalation	nervous system	All data are negative	Multiple animal species	NOAEL 0.41 mg/l	13 weeks
4-Methylpentan-2-one	Ingestion	endocrine system hematopoietic system liver kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1,000 mg/kg/day	13 weeks
4-Methylpentan-2-one	Ingestion	heart immune system muscles nervous system respiratory system	All data are negative	Rat	NOAEL 1,040 mg/kg/day	120 days
Butan-1-ol	Inhalation	blood	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 0.3 mg/l	3 months
Butan-1-ol	Inhalation	auditory system	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
Butan-1-ol	Inhalation	liver kidney and/or bladder respiratory system	Some positive data exist, but the data are not sufficient for classification	Guinea pig	NOAEL Not available	3 months
Butan-1-ol	Inhalation	nervous system	All data are negative	Rat	NOAEL 9.09 mg/l	13 weeks
Butan-1-ol	Ingestion	blood	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 500 mg/kg/day	13 weeks
Xylene	Inhalation	nervous system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0.4 mg/l	4 weeks
Xylene	Inhalation	auditory system	May cause damage to organs though prolonged or repeated exposure	Rat	LOAEL 7.8 mg/l	5 days
Xylene	Inhalation	liver	Some positive data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL Not available	
Xylene	Inhalation	heart endocrine system hematopoietic system muscles kidney and/or bladder respiratory	All data are negative	Multiple animal species	NOAEL 3.5 mg/l	13 weeks

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Xylene	Ingestion	system auditory system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 900 mg/kg/day	2 weeks
Xylene	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1,500 mg/kg/day	90 days
Xylene	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL Not available	
Xylene	Ingestion	heart skin endocrine system bone, teeth, nails, and/or hair hematopoietic system immune system nervous system respiratory system	All data are negative	Mouse	NOAEL 1,000 mg/kg/day	103 weeks
Diethylenetriamine	Ingestion	endocrine system liver kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1,210 mg/kg/day	90 days
4-Hydroxy-4-methylpentan-2-one	Inhalation	blood liver kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 4.5 mg/l	6 weeks
4-Hydroxy-4-methylpentan-2-one	Ingestion	endocrine system blood liver kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1,000 mg/kg/day	44 days
2,4,6-Tris(dimethylaminomethyl)phenol	Dermal	skin liver nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 125 mg/kg/day	28 days
2,4,6-Tris(dimethylaminomethyl)phenol	Dermal	auditory system hematopoietic system eyes	All data are negative	Rat	NOAEL 125 mg/kg/day	28 days
Ethylbenzene	Inhalation	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1.1 mg/l	2 years
Ethylbenzene	Inhalation	liver	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 1.1 mg/l	103 weeks
Ethylbenzene	Inhalation	hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 3.4 mg/l	28 days
Ethylbenzene	Inhalation	auditory system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 2.4 mg/l	5 days
Ethylbenzene	Inhalation	endocrine system	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 3.3 mg/l	103 weeks
Ethylbenzene	Inhalation	bone, teeth, nails, and/or hair muscles	All data are negative	Multiple animal species	NOAEL 4.2 mg/l	90 days
Ethylbenzene	Inhalation	heart immune system respiratory system	All data are negative	Multiple animal species	NOAEL 3.3 mg/l	2 years
Ethylbenzene	Ingestion	liver kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 680 mg/kg/day	6 months

Aspiration Hazard

Name	Value
4-Methylpentan-2-one	Some positive data exist, but the data are not sufficient for classification
Butan-1-ol	Some positive data exist, but the data are not sufficient for classification
Xylene	Aspiration hazard
Ethylbenzene	Aspiration hazard

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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 agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 12 are based on UN GHS calculation rules and classifications derived from 3M assessments.

12.1. Toxicity

No component test data available.

Material	Organism	Type	Exposure	Test endpoint	Test result
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12.2. Persistence and degradability

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

See Section 11.1 Information on toxicological effects

Incinerate uncured product in a permitted waste incineration facility. Dispose of completely cured (or polymerised) material in a permitted industrial waste facility. As a disposal alternative, incinerate uncured product in a permitted waste incineration facility. If no other disposal options are available, waste product that has been completely cured or polymerised may be placed in a landfill properly designed for industrial waste. 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)

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08 04 09* Waste adhesives and sealants containing organic solvents or other dangerous substances

SECTION 14: Transportation information

GR-2000-9949-1

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

IMDG-CODE: UN1263, PAINT RELATED MATERIAL, 3, II , IMDG-Code segregation code: NONE, LIMITED QUANTITY, EMS: FE,SE.

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

GR-2001-0257-6

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

IMDG-CODE: UN1263, PAINT RELATED MATERIAL, 3, II , IMDG-Code segregation code: NONE, 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

<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
4-Methylpentan-2-one	108-10-1	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

All applicable chemical ingredients in this material are listed on the European Inventory of Existing Chemical Substances (EINECS), or are exempt polymers whose monomers are listed on EINECS. Contact 3M for more information. 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

EUH066	Repeated exposure may cause skin dryness or cracking.
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
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.

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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.
R20/21/22	Harmful by inhalation, in contact with skin and if swallowed.
R21	Harmful in contact with skin.
R22	Harmful if swallowed.
R34	Causes burns.
R36	Irritating to eyes.
R37	Irritating to respiratory system.
R37/38	Irritating to respiratory system and skin.
R38	Irritating to skin.
R41	Risk of serious damage to eyes.
R43	May cause sensitisation by skin contact.
R52	Harmful to aquatic organisms.
R52/53	Harmful 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:

Section 8: Personal Protection - Skin/body information information was modified.
Section 1: Product identification numbers heading information was modified.
Section 1: Product identification numbers information was modified.
Section 16: List of relevant R phrase information information was modified.
Section 3: Composition/ Information of ingredients table information was modified.
Section 9: Flammability (solid, gas) information information was modified.
Section 2: Other hazards phrase information was modified.
Copyright information was modified.
Telephone header information was modified.
Company Telephone information was modified.
Section 11: Aspiration Hazard Table information was modified.
Section 11: Acute Toxicity table information was modified.
Section 11: Carcinogenicity Table information was modified.
Section 11: Serious Eye Damage/Irritation Table information was modified.
Section 11: Germ Cell Mutagenicity Table information was modified.
Section 11: Skin Sensitization Table information was modified.
Section 11: Respiratory Sensitization Table information was modified.
Section 11: Reproductive Toxicity Table information was modified.
Section 11: Skin Corrosion/Irritation Table information was modified.
Section 11: Target Organs - Repeated Table information was modified.
Section 11: Target Organs - Single Table information was modified.
Section 5: Fire - Extinguishing media information information was modified.
Section 6: Accidental release personal information information was modified.
Section 6: Accidental release environmental information information was modified.
Section 6: Accidental release clean-up information information was modified.
Section 7: Precautions safe handling information information was modified.
Section 7: Conditions safe storage information was modified.
Section 8: Appropriate Engineering controls information information was modified.
Section 8: Personal Protection - Eye information information was modified.
Section 8: Personal Protection - Skin/hand information information was modified.
Section 8: Personal Protection - Respiratory Information information was modified.

Section 13: 13.1. Waste disposal note information was modified.
Section 13: Standard Phrase Category Waste GHS information was modified.
Section 11: Lactation table heading information was added.
Lactation Table information was added.
Section 11: Lactation table - Name heading information was added.
Section 11: Lactation table - Route heading information was added.
Section 11: Lactation table - Species heading information was added.
Section 11: Lactation table - Value heading information was added.
Label: Graphic Text information was added.
Section 9: Odour Threshold information was added.
Section 9: Solubility (non-water) information was added.
Section 09: Decomposition Temperature information was added.
Section 11: Single exposure may cause: heading information was added.
Section 11: Prolonged or repeated exposure may cause: heading information was added.
Section 11: Single exposure may cause standard phrases information was added.
Section 11: Prolonged or repeated exposure may cause standard phrases information was added.
Legend description information was added.
BLV Reg Agency Desc information was added.
Section 10: Hazardous decomposition products during combustion text information was added.
Section 11: Disclosed components not in tables text information was added.
Section 12: Classification Warning information was added.
Section 11: Classification disclaimer information was added.
Section 8: 8.1.1 Biological limit values table heading information was added.
Section 8: BLV table information was added.
Section 8: BLV table ingredient column heading information was added.
Section 8: BLV table cas nbr column heading information was added.
Section 8: BLV table agency column heading information was added.
Section 8: BLV table cas nbr column heading information was added.
Section 8: BLV table biological specimen Column heading information was added.
Section 8: BLV table sampling time Column heading information was added.
Section 8: BLV table value Column heading information was added.
Section 8: BLV table additional comments Column heading information was added.
Label: Graphic information was added.
Label: Graphic information was added.
Label: Graphic Text information was added.
Section 9: Flammability (solid, gas) information information was added.
Section 8: Eye/face protection text information was deleted.
Section 8: Respiratory protection - recommended respirators information was deleted.
Section 2: Symbol information was deleted.
Section 2: Symbols heading information was deleted.
Section 12: Acute aquatic hazard information information was deleted.
Section 12: Chronic aquatic hazard heading information was deleted.
Section 12: Acute aquatic hazard heading information was deleted.
Section 12: Chronic aquatic hazard information information was deleted.
Section 8: mg/m³ key information was deleted.
Section 8: ppm key information was deleted.
Section 11: Classification disclaimer information was deleted.
Section 11: Health Effects - Other information information was deleted.
Section 12: Classification Warning information 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.

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