



Safety Data Sheet

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Transportation version number:	2.00 (22/10/2011)		

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

IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

3M EZ Fix Flexible Patch PN 05888

Product identification numbers

FS-9100-5022-8

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

Automotive.

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

This product is a kit or a multipart product which consists of multiple, independently packaged components. A Safety Data Sheet for each of these components is included. Please do not separate the component Safety Data Sheets from this cover page. The document numbers of the MSDSs for components of this product are:

19-6313-1

TRANSPORTATION INFORMATION

FS-9100-5022-8

ADR/RID: UN3175, NOT RESTRICTED - SPECIAL PROVISION 216 FULFILLED, (--).

IMDG-CODE: UN3175, NOT RESTRICTED - SPECIAL PROVISION 216 FULFILLED, EMS: --.

ICAO/IATA: NOT RESTRICTED, AS PER SPECIAL PROVISION A46, information required for air way bill.

KIT LABEL

2.2. Label elements

CLP REGULATION (EC) No 1272/2008

SIGNAL WORD

DANGER!

Symbols:

GHS02 (Flame) |GHS07 (Exclamation mark) |GHS09 (Environment) |

Pictograms



HAZARD STATEMENTS:

H225	Highly flammable liquid and vapour.
H315	Causes skin irritation.
H336	May cause drowsiness or dizziness.
H410	Very toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

Prevention:

P210A	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P273	Avoid release to the environment.

Disposal:

P501	Dispose of contents/container in accordance with applicable local/regional/national/international regulations.
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SUPPLEMENTAL INFORMATION

Supplemental Hazard Statements:

EUH205	Contains epoxy constituents. May produce an allergic reaction.
EUH208	Contains 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane. May produce an allergic reaction.

Notes on labelling

Asp 1 not required as volume of liquid in each sponge is too low to present a hazard.

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

Symbol(s)



Highly
Flammable



Harmful



Dangerous
for the

environment

Contains:

Consult the component labels for disclosable ingredients.

Risk phrases

R11	Highly flammable.
R20/21	Harmful by inhalation and in contact with skin.
R38	Irritating to skin.
R50/53	Very 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.
S23A	Do not breathe vapour.
S36/37	Wear suitable protective clothing and gloves.
S61	Avoid release to the environment. Refer to special instructions/safety data sheets.

Special provisions concerning the labelling of certain substances

Contains 4,4 Isopropylidenediphenol epichlorohydrin polymer May produce an allergic reaction.

Contains epoxy resins. See information supplied by manufacturer.

Notes on labelling

For container <= 125 mL, use F, Xn, N, R20/21-3109-1100, S36/37-62-2055.

R65 Not applied as quantity of solvent is too low to aspirate.

Disclosed components can be found on the product label for 19-6313-1.

Revision information:

Revision Changes:

Label: CLP Precautionary - Prevention information was modified.

Contains statement for sensitizers information was added.

Contains statement for sensitizers information was added.

Contains statement for sensitizers information was added.

Contains statement for sensitizers information was added.

Contains statement for sensitizers information was deleted.

Contains statement for sensitizers information was deleted.



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Document group:	19-6313-1	Version number:	14.00
Revision date:	06/11/2013	Supersedes date:	10/09/2013
Transportation version number:	2.00 (22/10/2011)		

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 Adhesion Promoter 4298 and 3M Adhesion Promoter 06396

Product identification numbers

70-0706-9842-1 70-0706-9843-9 FS-9100-4256-3

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

Identified uses

Automotive - Industrial/Professional Use

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

CLP REGULATION (EC) No 1272/2008

CLASSIFICATION:

Flammable Liquid, Category 2 - Flam. Liq. 2; H225

Skin Corrosion/Irritation, Category 2 - Skin Irrit. 2; H315

Specific Target Organ Toxicity-Single Exposure, Category 3 - STOT SE 3; H336

Hazardous to the Aquatic Environment (Acute), Category 1 - Aquatic Acute 1; H400

Hazardous to the Aquatic Environment (Chronic), Category 1 - Aquatic Chronic 1; H410

For full text of H phrases, see Section 16.

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

Indication of danger

Highly flammable; F; R11
Harmful; Xn; R20/21
Irritant; Xi; R38
Dangerous for the environment; N; R50/53

For full text of R phrases, see Section 16.

2.2. Label elements

CLP REGULATION (EC) No 1272/2008

SIGNAL WORD

DANGER!

Symbols:

GHS02 (Flame) |GHS07 (Exclamation mark) |GHS09 (Environment) |

Pictograms



Ingredient
Cyclohexane

CAS Nbr
110-82-7

% by Wt
45 - 50

HAZARD STATEMENTS:

H225 Highly flammable liquid and vapour.
H315 Causes skin irritation.
H336 May cause drowsiness or dizziness.
H410 Very toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

Prevention:

P210A Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P273 Avoid release to the environment.

Response:

P370 + P378G In case of fire: Use a fire fighting agent suitable for flammable liquids and solids such as dry chemical or carbon dioxide to extinguish.

Disposal:

P501 Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

SUPPLEMENTAL INFORMATION

Supplemental Hazard Statements:

EUH205 Contains epoxy constituents. May produce an allergic reaction.
EUH208 Contains 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane. May produce an allergic reaction.

3M Adhesion Promoter 4298 and 3M Adhesion Promoter 06396

2% of the mixture consists of components of unknown acute oral toxicity.
2% of the mixture consists of components of unknown acute dermal toxicity.
4% of the mixture consists of components of unknown acute inhalation toxicity.
Contains 34% of components with unknown hazards to the aquatic environment.

Notes on labelling

Asp 1 not required as volume of liquid in each sponge is too low to present a hazard.

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

Symbol(s)



Highly
Flammable



Harmful



Dangerous
for the
environment

Contains:

Xylene

Risk phrases

R11 Highly flammable.
R20/21 Harmful by inhalation and in contact with skin.
R38 Irritating to skin.
R50/53 Very 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.
S23A Do not breathe vapour.
S36/37 Wear suitable protective clothing and gloves.
S61 Avoid release to the environment. Refer to special instructions/safety data sheets.

Special provisions concerning the labelling of certain substances

Contains 4,4 Isopropylidenediphenol epichlorohydrin polymer May produce an allergic reaction.
Contains epoxy resins. See information supplied by manufacturer.

Notes on labelling

For containers <125 mL, label with: F, Xn, N; R20/21-3109-1100 and S23A-36/37-2055.
R65 not assigned as product is a sponge with small volume of liquid and does not pose as an aspiration hazard.

2.3. Other hazards

None known.

SECTION 3: Composition/information on ingredients

Ingredient	CAS Nbr	EU Inventory	% by Wt	Classification
Propan-2-ol	67-63-0	EINECS 200-661-7	< 1	F:R11; Xi:R36; R67 (EU) Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336 (CLP)

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Cyclohexane	110-82-7	EINECS 203-806-2	45 - 50	F:R11; Xn:R65; Xi:R38; N:R50/53; R67 - Nota 4 (EU) Flam. Liq. 2, H225; Asp. Tox. 1, H304; Skin Irrit. 2, H315; STOT SE 3, H336; Aquatic Acute 1, H400,M=1; Aquatic Chronic 1, H410,M=1 (CLP)
Xylene	1330-20-7	EINECS 215-535-7	30 - 35	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)
Ethylbenzene	100-41-4	EINECS 202-849-4	<= 11	F:R11; Xn:R20 (EU) R52 (Self Classified) Flam. Liq. 2, H225; Acute Tox. 4, H332 (CLP)
Ethanol	64-17-5	EINECS 200-578-6	5 - 10	F:R11 (EU) Flam. Liq. 2, H225 (CLP)
Acrylate Polymer	Trade Secret		1 - 5	
2,5-Furandione, reaction products with polypropylene, chlorinated	68609-36-9		1 - 5	
Ethyl acetate	141-78-6	EINECS 205-500-4	<= 4	F:R11; Xi:R36; R66; R67 (EU) Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336; EUH066 (CLP)
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	25068-38-6	NLP 500-033-5	< 0.5	Xi:R36-38; N:R51/53; R43 (EU) Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; Aquatic Chronic 2, H411 (CLP)
2-(3,4-Epoxy-cyclohexyl)ethyltrimethoxysilane	3388-04-3	EINECS 222-217-1	<= 0.4	Carc.Cat.3:R40; Muta.Cat.3:R68 (Vendor) Muta. 2, H341; Carc. 2, H351 (Vendor)
Methanol	67-56-1	EINECS 200-659-6	<= 0.4	F:R11; T:R23-24-25-39/23; T:R39/24; T:R39/25 (EU) Flam. Liq. 2, H225; Acute Tox. 3, H331; Acute Tox. 3, H311; Acute Tox. 3, H301; STOT SE 1, H370 (CLP)
Toluene	108-88-3	EINECS 203-625-9	<= 0.3	Repr.Cat.3:R63; F:R11; Xn:R48/20; Xn:R65; Xi:R38; R67 - Nota 4 (EU) Flam. Liq. 2, H225; Asp. Tox. 1, H304; Skin Irrit. 2, H315; Repr. 2, H361d; STOT SE 3, H336; STOT RE 1, H372 (CLP)

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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 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

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 and solids 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

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

3M Adhesion Promoter 4298 and 3M Adhesion Promoter 06396

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.

6.3. Methods and material for containment and cleaning up

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 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. 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.

7.2. Conditions for safe storage including any incompatibilities

Store in a well-ventilated place. Keep cool. Keep container tightly closed. Protect from sunlight. Store away from heat. 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 Safety Comm. (UK)	TWA:441 mg/m ³ (100 ppm);STEL:552 mg/m ³ (125 ppm)	Skin Notation
Toluene	108-88-3	Health and Safety Comm. (UK)	TWA: 191 mg/m ³ (50 ppm); STEL: 384 mg/m ³ (100 ppm)	Skin Notation
Cyclohexane	110-82-7	Health and Safety Comm. (UK)	TWA:350 mg/m ³ (100 ppm);STEL:1050 mg/m ³ (300 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

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Ethyl acetate	141-78-6	Health and Safety Comm. (UK)	TWA:200 ppm;STEL:400 ppm	
Ethanol	64-17-5	Health and Safety Comm. (UK)	TWA:1920 mg/m ³ (1000 ppm)	
Methanol	67-56-1	Health and Safety Comm. (UK)	TWA:266 mg/m ³ (200 ppm);STEL:333 mg/m ³ (250 ppm)	Skin Notation
Propan-2-ol	67-63-0	Health and Safety Comm. (UK)	TWA:999 mg/m ³ (400 ppm);STEL:1250 mg/m ³ (500 ppm)	

Health and Safety Comm. (UK) : UK Health and Safety Commission

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:

Safety glasses with side shields.

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.

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

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

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.
Specific Physical Form:	Sponge holding approximately 2 milliliters of liquid.
Appearance/Odour	Liquid: yellow, solvent odour, absorbed onto a sponge. Physical properties reflect the liquid only.
Odour threshold	<i>No data available.</i>
pH	<i>Not applicable.</i>
Boiling point/boiling range	≥ 76.7 °C [<i>Test Method:Estimated</i>] [<i>Details:Initial</i>]
Melting point	<i>Not applicable.</i>
Flammability (solid, gas)	Not applicable.
Explosive properties	Not classified
Oxidising properties	Not classified
Flash point	1.1 °C [<i>Test Method:Setaflash</i>]
Autoignition temperature	430 °C
Flammable Limits(LEL)	1 % [<i>Test Method:Estimated</i>]
Flammable Limits(UEL)	6 % [<i>Test Method:Estimated</i>]
Vapour pressure	16,265.3 Pa [<i>@ 20 °C</i>]
Relative density	0.82 [<i>Ref Std:WATER=1</i>]
Water solubility	10 %
Solubility- non-water	<i>No data available.</i>
Partition coefficient: n-octanol/water	<i>No data available.</i>
Evaporation rate	6.4 [<i>Test Method:Estimated</i>] [<i>Ref Std:XYLENE=1</i>]
Vapour density	1.7 [<i>Test Method:Estimated</i>] [<i>Ref Std:AIR=1</i>]
Decomposition temperature	<i>No data available.</i>
Viscosity	0.03 - 0.04 Pa-s
Density	0.8 kg/l
9.2. Other information	
Hazardous air pollutants	< 35 % weight [<i>Test Method:Calculated</i>]
Volatile organic compounds (VOC)	827 g/l [<i>Test Method:South Cost Air Qual Mgmt Dist</i>]
Percent volatile	± 95 %
VOC less H₂O & exempt solvents	827 g/l [<i>Test Method:South Cost Air Qual Mgmt Dist</i>]

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 acids.

Strong oxidising agents.

10.6 Hazardous decomposition products

Substance

None known.

Condition

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 target organ effects after inhalation.

Skin contact

May be harmful in contact with skin.

Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness. Allergic skin reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

Eye contact

Moderate eye irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Ingestion

Gastrointestinal irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhoea.

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.

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.

Additional information:

3M Adhesion Promoter 4298 and 3M Adhesion Promoter 06396

This product contains ethanol. Alcoholic beverages and ethanol in alcoholic beverages have been classified by the International Agency for Research on Cancer as carcinogenic to humans. There are also data associating human consumption of alcoholic beverages with developmental toxicity and liver toxicity. Exposure to ethanol during the foreseeable use of this product is not expected to cause cancer, developmental toxicity, or liver toxicity.

Toxicological Data
Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		Data not available or insufficient for classification; calculated ATE3,653.7 mg/kg
Overall product	Inhalation-Vapor(4 hr)		Data not available or insufficient for classification; calculated ATE31 mg/l
Overall product	Ingestion		Data not available or insufficient for classification; calculated ATE >5,000 mg/kg
Cyclohexane	Dermal	Rat	LD50 > 2,000 mg/kg
Cyclohexane	Inhalation-Vapor (4 hours)	Rat	LC50 > 32.9 mg/l
Cyclohexane	Ingestion	Rat	LD50 6,200 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
Ethylbenzene	Dermal	Rabbit	LD50 15,433 mg/kg
Ethylbenzene	Inhalation-Vapor (4 hours)	Rat	LC50 17.4 mg/l
Ethylbenzene	Ingestion	Rat	LD50 4,769 mg/kg
Ethanol	Dermal	Rabbit	LD50 > 15,800 mg/kg
Ethanol	Inhalation-Vapor (4 hours)	Rat	LC50 124.7 mg/l
Ethanol	Ingestion	Rat	LD50 17,800 mg/kg
Ethyl acetate	Dermal	Rabbit	LD50 > 18,000 mg/kg
Ethyl acetate	Inhalation-Vapor (4 hours)	Rat	LC50 70.5 mg/l
Ethyl acetate	Ingestion	Rat	LD50 5,620 mg/kg
Acrylate Polymer			Data not available or insufficient for classification
2,5-Furandione, reaction products with polypropylene, chlorinated	Dermal	Guinea pig	LD50 > 1,000 mg/kg
2,5-Furandione, reaction products with polypropylene, chlorinated	Ingestion	Rat	LD50 > 3,200 mg/kg
Propan-2-ol	Dermal	Rabbit	LD50 12,870 mg/kg
Propan-2-ol	Inhalation-Vapor (4 hours)	Rat	LC50 72.6 mg/l
Propan-2-ol	Ingestion	Rat	LD50 4,710 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
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Dermal	Rat	LD50 > 1,600 mg/kg
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Ingestion	Rat	LD50 > 1,000 mg/kg
2-(3,4-Epoxy cyclohexyl)ethyltrimethoxysilane	Ingestion	Rat	LD50 8,520 mg/kg
Toluene	Dermal	Rat	LD50 12,000 mg/kg
Toluene	Inhalation-Vapor (4 hours)	Rat	LC50 30 mg/l
Toluene	Ingestion	Rat	LD50 2,600 mg/kg

ATE = acute toxicity estimate

3M Adhesion Promoter 4298 and 3M Adhesion Promoter 06396**Skin Corrosion/Irritation**

Name	Species	Value
Cyclohexane	Rabbit	Mild irritant
Xylene	Rabbit	Mild irritant
Ethylbenzene	Rabbit	Mild irritant
Ethanol	Rabbit	No significant irritation
Ethyl acetate	Rabbit	Minimal irritation
Acrylate Polymer		Data not available or insufficient for classification
2,5-Furandione, reaction products with polypropylene, chlorinated	Guinea pig	No significant irritation
Propan-2-ol	Multiple animal species	No significant irritation
Methanol	Rabbit	Mild irritant
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Rabbit	Mild irritant
2-(3,4-Epoxy-cyclohexyl)ethyltrimethoxysilane		Data not available or insufficient for classification
Toluene	Rabbit	Irritant

Serious Eye Damage/Irritation

Name	Species	Value
Cyclohexane	Rabbit	Mild irritant
Xylene	Rabbit	Mild irritant
Ethylbenzene	Rabbit	Moderate irritant
Ethanol	Rabbit	Moderate irritant
Ethyl acetate	Rabbit	Mild irritant
Acrylate Polymer		Data not available or insufficient for classification
2,5-Furandione, reaction products with polypropylene, chlorinated		Mild irritant
Propan-2-ol	Rabbit	Severe irritant
Methanol	Rabbit	Moderate irritant
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Rabbit	Moderate irritant
2-(3,4-Epoxy-cyclohexyl)ethyltrimethoxysilane		Data not available or insufficient for classification
Toluene	Rabbit	Moderate irritant

Skin Sensitisation

Name	Species	Value
Cyclohexane		Data not available or insufficient for classification
Xylene		Data not available or insufficient for classification
Ethylbenzene	Human	Not sensitizing
Ethanol	Human	Some positive data exist, but the data are not sufficient for classification
Ethyl acetate	Guinea pig	Not sensitizing
Acrylate Polymer		Data not available or insufficient for classification
2,5-Furandione, reaction products with polypropylene, chlorinated		Data not available or insufficient for classification
Propan-2-ol	Guinea pig	Not sensitizing
Methanol	Guinea pig	Not sensitizing
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Human and animal	Sensitising
2-(3,4-Epoxy-cyclohexyl)ethyltrimethoxysilane		Data not available or insufficient for classification
Toluene	Guinea pig	Not sensitizing

Respiratory Sensitisation

Name	Species	Value
Cyclohexane		Data not available or insufficient for classification
Xylene		Data not available or insufficient for classification
Ethylbenzene		Data not available or insufficient for classification
Ethanol		Data not available or insufficient for classification
Ethyl acetate		Data not available or insufficient for classification
Acrylate Polymer		Data not available or insufficient for classification

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2,5-Furandione, reaction products with polypropylene, chlorinated		Data not available or insufficient for classification
Propan-2-ol		Data not available or insufficient for classification
Methanol		Data not available or insufficient for classification
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Human	Some positive data exist, but the data are not sufficient for classification
2-(3,4-Epoxy cyclohexyl)ethyltrimethoxysilane		Data not available or insufficient for classification
Toluene		Data not available or insufficient for classification

Germ Cell Mutagenicity

Name	Route	Value
Cyclohexane	In Vitro	Not mutagenic
Cyclohexane	In vivo	Some positive data exist, but the data are not sufficient for classification
Xylene	In Vitro	Not mutagenic
Xylene	In vivo	Not mutagenic
Ethylbenzene	In vivo	Not mutagenic
Ethylbenzene	In Vitro	Some positive data exist, but the data are not sufficient for classification
Ethanol	In Vitro	Some positive data exist, but the data are not sufficient for classification
Ethanol	In vivo	Some positive data exist, but the data are not sufficient for classification
Ethyl acetate	In Vitro	Not mutagenic
Ethyl acetate	In vivo	Not mutagenic
Acrylate Polymer		Data not available or insufficient for classification
2,5-Furandione, reaction products with polypropylene, chlorinated		Data not available or insufficient for classification
Propan-2-ol	In Vitro	Not mutagenic
Propan-2-ol	In vivo	Not 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
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	In vivo	Not mutagenic
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	In Vitro	Some positive data exist, but the data are not sufficient for classification
2-(3,4-Epoxy cyclohexyl)ethyltrimethoxysilane		Data not available or insufficient for classification
Toluene	In Vitro	Not mutagenic
Toluene	In vivo	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Cyclohexane			Data not available or insufficient for classification
Xylene	Dermal	Rat	Not carcinogenic
Xylene	Ingestion	Multiple animal species	Not carcinogenic
Xylene	Inhalation	Human	Some positive data exist, but the data are not sufficient for classification
Ethylbenzene	Inhalation	Multiple animal species	Carcinogenic.
Ethanol	Ingestion	Multiple animal species	Some positive data exist, but the data are not sufficient for classification
Ethyl acetate			Data not available or insufficient for classification
Acrylate Polymer			Data not available or insufficient for classification
2,5-Furandione, reaction products with polypropylene, chlorinated			Data not available or insufficient for classification
Propan-2-ol	Inhalation	Rat	Some positive data exist, but the data are not sufficient for classification
Methanol	Inhalation	Multiple animal species	Not carcinogenic
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
2-(3,4-Epoxy cyclohexyl)ethyltrimethoxysilane			Data not available or insufficient for classification

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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

Reproductive Toxicity
Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
Cyclohexane	Inhalation	Not toxic to female reproduction	Rat	NOAEL 24 mg/l	2 generation
Cyclohexane	Inhalation	Not toxic to male reproduction	Rat	NOAEL 24 mg/l	2 generation
Cyclohexane	Inhalation	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 6.9 mg/l	2 generation
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
Ethylbenzene	Inhalation	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 4.3 mg/l	prematuring & during gestation
Ethanol	Inhalation	Not toxic to development	Rat	NOAEL 38 mg/l	during gestation
Ethanol	Ingestion	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 5,200 mg/kg/day	prematuring & during gestation
Ethyl acetate		Data not available or insufficient for classification			
Acrylate Polymer		Data not available or insufficient for classification			
2,5-Furandione, reaction products with polypropylene, chlorinated		Data not available or insufficient for classification			
Propan-2-ol	Ingestion	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 400 mg/kg/day	during organogenesis
Propan-2-ol	Inhalation	Some positive developmental data exist, but the data are not sufficient for classification	Rat	LOAEL 9 mg/l	during gestation
Methanol	Ingestion	Some positive male reproductive data exist, but the data are not sufficient for classification	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
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Ingestion	Not toxic to female reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Ingestion	Not toxic to male reproduction	Rat	NOAEL 750 mg/kg/day	2 generation

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4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Dermal	Not toxic to development	Rabbit	NOAEL 300 mg/kg/day	during organogenesis
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Ingestion	Not toxic to development	Rat	NOAEL 750 mg/kg/day	2 generation
2-(3,4-Epoxycyclohexyl)ethyltrimethoxysilane		Data not available or insufficient for classification			
Toluene	Inhalation	Some positive female reproductive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
Toluene	Inhalation	Some positive male reproductive data exist, but the data are not sufficient for classification	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

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
Cyclohexane	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human and animal	NOAEL Not available	
Cyclohexane	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human and animal	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
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	
Ethanol	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	LOAEL 2.6 mg/l	30 minutes
Ethanol	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	LOAEL 9.4 mg/l	not available
Ethanol	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Multiple animal species	NOAEL not available	

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Ethanol	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Dog	NOAEL 3,000 mg/kg	
Ethyl acetate	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Ethyl acetate	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
Ethyl acetate	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Acrylate Polymer			Data not available or insufficient for classification			
2,5-Furandione, reaction products with polypropylene, chlorinated			Data not available or insufficient for classification			
Propan-2-ol	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Propan-2-ol	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
Propan-2-ol	Inhalation	auditory system	Some positive data exist, but the data are not sufficient for classification	Guinea pig	NOAEL 13.4 mg/l	24 hours
Propan-2-ol	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	poisoning and/or abuse
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
2-(3,4-Epoxy-cyclohexyl)ethyltrimethoxysilane			Data not available or insufficient for classification			
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	Some positive data exist, but the data are not sufficient for classification	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

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Cyclohexane	Inhalation	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 24 mg/l	90 days
Cyclohexane	Inhalation	auditory system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1.7 mg/l	90 days
Cyclohexane	Inhalation	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rabbit	NOAEL 2.7 mg/l	10 weeks
Cyclohexane	Inhalation	hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 24 mg/l	14 weeks
Cyclohexane	Inhalation	peripheral nervous system	All data are negative	Rat	NOAEL 8.6 mg/l	30 weeks
Xylene	Inhalation	nervous system	Causes damage to organs through	Rat	LOAEL 0.4	4 weeks

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			prolonged or repeated exposure		mg/l	
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 system	All data are negative	Multiple animal species	NOAEL 3.5 mg/l	13 weeks
Xylene	Ingestion	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
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
Ethanol	Inhalation	liver	Some positive data exist, but the data are not sufficient for classification	Rabbit	LOAEL 124 mg/l	365 days
Ethanol	Inhalation	hematopoietic system immune system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 25 mg/l	14 days
Ethanol	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 8,000 mg/kg/day	4 months
Ethanol	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Dog	NOAEL 3,000 mg/kg/day	7 days
Ethyl acetate	Inhalation	endocrine system	Some positive data exist, but the	Rat	NOAEL	90 days

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		liver nervous system	data are not sufficient for classification		0.043 mg/l	
Ethyl acetate	Inhalation	hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Rabbit	LOAEL 16 mg/l	40 days
Ethyl acetate	Ingestion	hematopoietic system liver kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 3,600 mg/kg/day	90 days
Acrylate Polymer			Data not available or insufficient for classification			
2,5-Furandione, reaction products with polypropylene, chlorinated			Data not available or insufficient for classification			
Propan-2-ol	Inhalation	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 12.3 mg/l	24 months
Propan-2-ol	Inhalation	nervous system	All data are negative	Rat	NOAEL 12 mg/l	13 weeks
Propan-2-ol	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 400 mg/kg/day	12 weeks
Methanol	Inhalation	liver	All data are negative	Rat	NOAEL 6.55 mg/l	4 weeks
Methanol	Inhalation	respiratory system	All data are negative	Rat	NOAEL 13.1 mg/l	6 weeks
Methanol	Ingestion	liver nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 2,500 mg/kg/day	90 days
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Dermal	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1,000 mg/kg/day	2 years
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Dermal	nervous system	All data are negative	Rat	NOAEL 1,000 mg/kg/day	13 weeks
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Ingestion	auditory system heart endocrine system hematopoietic system liver eyes kidney and/or bladder	All data are negative	Rat	NOAEL 1,000 mg/kg/day	28 days
2-(3,4-Epoxy-cyclohexyl)ethyltri-methoxysilane			Data not available or insufficient for classification			
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	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 11.3 mg/l	15 weeks
Toluene	Inhalation	endocrine system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1.1 mg/l	4 weeks
Toluene	Inhalation	immune system	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL Not available	20 days
Toluene	Inhalation	bone, teeth, nails, and/or hair	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 1.1 mg/l	8 weeks
Toluene	Inhalation	hematopoietic	Some positive data exist, but the	Human	NOAEL Not	occupational

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		system vascular system	data are not sufficient for classification		available	exposure
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	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 2,500 mg/kg/day	13 weeks
Toluene	Ingestion	liver kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL 2,500 mg/kg/day	13 weeks
Toluene	Ingestion	hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 600 mg/kg/day	14 days
Toluene	Ingestion	endocrine system	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 105 mg/kg/day	28 days
Toluene	Ingestion	immune system	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 105 mg/kg/day	4 weeks

Aspiration Hazard

Name	Value
Cyclohexane	Aspiration hazard
Xylene	Aspiration hazard
Ethylbenzene	Aspiration hazard
Ethanol	Not an aspiration hazard
Ethyl acetate	Not an aspiration hazard
Acrylate Polymer	Not an aspiration hazard
2,5-Furandione, reaction products with polypropylene, chlorinated	Not an aspiration hazard
Propan-2-ol	Not an aspiration hazard
Methanol	Not an aspiration hazard
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Not an aspiration hazard
2-(3,4-Epoxy-cyclohexyl)ethyltrimethoxysilane	Not an aspiration hazard
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

No product test data available.

Material	CAS Nbr	Organism	Type	Exposure	Test endpoint	Test result
4,4'-Isopropylidene diphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	25068-38-6	Ricefish	Laboratory	96 hours	LC50	1.41 mg/l

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4,4'-Isopropylidene diphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	25068-38-6	Water flea	Laboratory	21 days	NOEC	0.3 mg/l
2,5-Furandione, reaction products with polypropylene, chlorinated	68609-36-9		Data not available or insufficient for classification			
Ethyl acetate	141-78-6	Fish	Experimental	96 hours	LC50	212.5 mg/l
Ethyl acetate	141-78-6	Crustacea	Experimental	48 hours	EC50	164 mg/l
Ethyl acetate	141-78-6	Green algae	Experimental	72 hours	EC50	2,500 mg/l
Ethyl acetate	141-78-6	Water flea	Experimental	21 days	NOEC	2.4 mg/l
Cyclohexane	110-82-7	Green algae	Experimental	72 hours	EC50	3.4 mg/l
Cyclohexane	110-82-7	Fathead minnow	Experimental	96 hours	LC50	4.53 mg/l
Cyclohexane	110-82-7	Water flea	Experimental	48 hours	EC50	0.9 mg/l
Ethanol	64-17-5	Water flea	Experimental	48 hours	EC50	5,012 mg/l
Ethanol	64-17-5	Green algae	Experimental	96 hours	EC50	1,000 mg/l
Ethanol	64-17-5	Rainbow trout	Experimental	96 hours	LC50	42 mg/l
Ethanol	64-17-5	Green algae	Experimental	96 hours	NOEC	<500 mg/l
Ethanol	64-17-5	Water flea	Experimental	11 days	NOEC	=9.6 mg/l
Ethylbenzene	100-41-4	Water flea	Experimental	24 hours	EC50	1.81 mg/l
Ethylbenzene	100-41-4	Green algae	Laboratory	96 hours	EC50	3.6 mg/l
Ethylbenzene	100-41-4	Rainbow trout	Experimental	96 hours	LC50	4.2 mg/l
Methanol	67-56-1	Fathead minnow	Experimental	96 hours	LC50	22,300 mg/l
Methanol	67-56-1	Water flea	Experimental	48 hours	EC50	22,200 mg/l
Methanol	67-56-1	Algae or other aquatic plants	Experimental	96 hours	EC50	16.9 mg/l
Methanol	67-56-1	Algae or other aquatic plants	Experimental	96 hours	NOEC	9.96 mg/l
Toluene	108-88-3	Green Algae	Experimental	72 hours	EC50	12.5 mg/l
Toluene	108-88-3	Water flea	Experimental	48 hours	EC50	3.78 mg/l
Toluene	108-88-3	Coho Salmon	Experimental	96 hours	LC50	5.5 mg/l
Toluene	108-88-3	Sheepshead Minnow	Experimental	28 days	NOEC	3.2 mg/l
Xylene	1330-20-7	Green algae	Experimental	72 hours	EC50	0.8 mg/l
Xylene	1330-20-7	Rainbow trout	Experimental	96 hours	LC50	2.6 mg/l
Xylene	1330-20-7	Water flea	Experimental	48 hours	EC50	1.1 mg/l
Xylene	1330-20-7	Water flea	Experimental	21 days	NOEC	0.41 mg/l
Xylene	1330-20-7	Green algae	Experimental	72 hours	NOEC	0.73 mg/l
Propan-2-ol	67-63-0	Crustacea	Experimental	48 hours	EC50	1,400 mg/l
Propan-2-ol	67-63-0	Algae	Experimental	24 hours	EC50	>1,000 mg/l
Propan-2-ol	67-63-0	Fathead minnow	Experimental	96 hours	LC50	6,120 mg/l
Propan-2-ol	67-63-0	Water flea	Experimental	21 days	NOEC	30 mg/l

12.2. Persistence and degradability

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Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
4,4'-Isopropylidene diphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	25068-38-6	Laboratory Hydrolysis		Hydrolytic half-life	<2 days (t 1/2)	Other methods
4,4'-Isopropylidene diphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	25068-38-6	Laboratory Biodegradation	28 days	BOD	0 % weight	OECD 301C - MITI test (I)
2,5-Furandione, reaction products with polypropylene, chlorinated	68609-36-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Ethyl acetate	141-78-6	Experimental Photolysis		Photolytic half-life (in air)	20.0 days (t 1/2)	Other methods
Ethyl acetate	141-78-6	Experimental Biodegradation	14 days	BOD	66 % weight	OECD 301C - MITI test (I)
Cyclohexane	110-82-7	Experimental Photolysis		Photolytic half-life (in air)	4.14 days (t 1/2)	Other methods
Cyclohexane	110-82-7	Experimental Biodegradation	28 days	BOD	77 % weight	OECD 301F - Manometric respirometry
Ethanol	64-17-5	Experimental Photolysis		Photolytic half-life (in air)	9.41 days (t 1/2)	Other methods
Ethanol	64-17-5	Experimental Biodegradation	14 days	BOD	89 % weight	OECD 301C - MITI test (I)
Ethylbenzene	100-41-4	Experimental Photolysis		Photolytic half-life (in air)	4.26 days (t 1/2)	
Ethylbenzene	100-41-4	Laboratory Biodegradation	14 days	BOD	81 % weight	Other methods
Methanol	67-56-1	Experimental Biodegradation	14 days	BOD	92 % weight	OECD 301C - MITI test (I)
Toluene	108-88-3	Experimental Biodegradation	14 days	BOD	100 % weight	OECD 301C - MITI test (I)
Toluene	108-88-3	Experimental Photolysis		Photolytic half-life (in air)	5.38 days (t 1/2)	Other methods
Xylene	1330-20-7	Laboratory Photolysis		Photolytic half-life (in air)	1.4 days (t 1/2)	Other methods
Propan-2-ol	67-63-0	Experimental Photolysis		Photolytic half-life (in air)	6.3 days (t 1/2)	Other methods
Propan-2-ol	67-63-0	Experimental Biodegradation	14 days	BOD	86 % weight	OECD 301C - MITI test (I)

12.3 : Bioaccumulative potential

3M Adhesion Promoter 4298 and 3M Adhesion Promoter 06396

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
4,4'-Isopropylidene diphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	25068-38-6	Laboratory BCF - Other	28 days	Bioaccumulation factor	<42	Other methods
2,5-Furandione, reaction products with polypropylene, chlorinated	68609-36-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Ethyl acetate	141-78-6	Experimental Bioaccumulation		Log Kow	0.73	Other methods
Cyclohexane	110-82-7	Experimental BCF - Other	56 days	Bioaccumulation factor	<129	Other methods
Ethanol	64-17-5	Modeled BCF - Other	28 days	Bioaccumulation factor	3.16	Estimated: Bioconcentration factor
Ethylbenzene	100-41-4	Experimental BCF - Other		Bioaccumulation factor	15	Other methods
Ethylbenzene	100-41-4	Experimental Bioconcentration		Log Kow	3.15	Other methods
Methanol	67-56-1	Experimental Bioconcentration		Log Kow	-0.77	Other methods
Methanol	67-56-1	Experimental BCF-Carp	3 days	Bioaccumulation factor	1	Other methods
Toluene	108-88-3	Experimental Bioconcentration		Log Kow	2.73	Other methods
Xylene	1330-20-7	Laboratory BCF - Rainbow Tr	56 days	Bioaccumulation factor	14	Other methods
Propan-2-ol	67-63-0	Experimental Bioconcentration		Log Kow	0.05	Other methods

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 in a permitted waste incineration facility. Combustion products will include halogen acid (HCl/HF/HBr). Facility must be capable of handling halogenated materials. As a disposal alternative, utilize an acceptable permitted waste disposal 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)

- 070104* Other organic solvents, washing liquids and mother liquors
- 15 02 02* Absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by dangerous substances

SECTION 14: Transportation information

70-0706-9842-1, 70-0706-9843-9

ADR/RID: UN3175, NOT RESTRICTED - SPECIAL PROVISION 216 FULFILLED, (--).

IMDG-CODE: UN3175, NOT RESTRICTED, AS PER SPECIAL PROVISION 216, EMS: --.

ICAO/IATA: NOT RESTRICTED, AS PER SPECIAL PROVISION A46, information required for air way bill.

FS-9100-4256-3

ADR/RID: UN3175, NOT RESTRICTED - SPECIAL PROVISION 216 FULFILLED, (--).

IMDG-CODE: UN3175, NOT RESTRICTED - SPECIAL PROVISION 216 FULFILLED, Marine Pollutant, (CYCLOHEXANE), EMS: --.

ICAO/IATA: NOT RESTRICTED, AS PER SPECIAL PROVISION A46, information required for air way bill.

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>
2-(3,4-Epoxy cyclohexyl)ethyltrimethoxysilane	3388-04-3	Carc. 2	Vendor classified according to Regulation (EC) No 1272/2008
2-(3,4-Epoxy cyclohexyl)ethyltrimethoxysilane	3388-04-3	Carc. Cat.3	Vendor classified according to Directive 67/548/EEC
Ethylbenzene	100-41-4	Grp. 2B: Possible human carc.	International Agency for Research on Cancer
Toluene	108-88-3	Gr. 3: Not classifiable	International Agency for Research on Cancer
Xylene	1330-20-7	Gr. 3: Not classifiable	International Agency

Global inventory status

Contact 3M for more information. The components of this material are in compliance with the China "Measures on Environmental Management of New Chemical Substance". 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 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.
H301	Toxic if swallowed.
H304	May be fatal if swallowed and enters airways.
H311	Toxic in contact with skin.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H336	May cause drowsiness or dizziness.
H341	Suspected of causing genetic defects.
H351	Suspected of causing cancer.
H361d	Suspected of damaging the unborn child.
H370	Causes damage to organs.
H372	Causes damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.

List of relevant R-phrases

R10	Flammable.
R11	Highly flammable.
R20	Harmful by inhalation.
R20/21	Harmful by inhalation and in contact with skin.
R21	Harmful in contact with skin.
R23	Toxic by inhalation.
R24	Toxic in contact with skin.
R25	Toxic if swallowed.
R36	Irritating to eyes.
R38	Irritating to skin.
R39/23	Toxic: danger of very serious irreversible effects through inhalation.
R39/24	Toxic: danger of very serious irreversible effects in contact with skin.
R39/25	Toxic: danger of very serious irreversible effects if swallowed.
R40	Limited evidence of a carcinogenic effect.
R43	May cause sensitisation by skin contact.
R48/20	Harmful: danger of serious damage to health by prolonged exposure through inhalation.

R50/53	Very toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.
R51/53	Toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.
R52	Harmful to aquatic organisms.
R63	Possible risk of harm to the unborn child.
R65	Harmful: May cause lung damage if swallowed.
R66	Repeated exposure may cause skin dryness or cracking.
R67	Vapours may cause drowsiness and dizziness.
R68	Possible risks of irreversible effects.

Revision information:

Revision Changes:

Section 8: Skin protection - recommended gloves information information was modified.

Safety phrase information was modified.

Section 12: Component ecotoxicity information information was modified.

Section 12: Persistence and Degradability information information was modified.

Section 12: Biocumulative potential information information was modified.

Section 2: Label remarks information was modified.

Section 11: Health Effects - Ingestion information information was modified.

Section 11: Health Effects - Additional 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: 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 8: Respiratory protection - recommended respirators information information was added.

Section 8: Personal Protection - Skin/body information information was added.

Section 8: Skin protection - protective clothing information information was added.

Section 8: Respiratory protection - recommended respirators guide information was added.

Label: CLP Percent Unknown information was added.

Label: CLP Percent Unknown information was added.

Label: CLP Percent Unknown information was added.

Label: CLP Percent Unknown information was added.

Section 8: Eye/face protection text information was deleted.

Section 8: Skin protection - protective clothing text information was deleted.

Section 8: mg/m³ key information was deleted.

Section 8: ppm key 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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