



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 Urethane Coating XF 129 (Part B)

Product Identification Numbers

GR-2001-0903-5 GR-2001-0908-4

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

CLP REGULATION (EC) No 1272/2008

CLASSIFICATION:

Flammable Liquid, Category 3 - Flam. Liq. 3; H226
Acute Toxicity, Category 4 - Acute Tox. 4; H332
Skin Corrosion/Irritation, Category 2 - Skin Irrit. 2; H315
Respiratory Sensitization, Category 1A - Resp. Sens. 1A; H334
Skin Sensitization, Category 1A - Skin Sens. 1A; H317
Specific Target Organ Toxicity-Single Exposure, Category 3 - STOT SE 3; H335

For full text of H phrases, see Section 16.

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

Indication of danger

Flammable; R10
Harmful; Xn; R20
Irritant; Xi; R37
Sensitizing; R42/43

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) | GHS08 (Health Hazard) |

Pictograms



Ingredient	CAS Nbr	% by Wt
Hexamethylene diisocyanate, oligomers	28182-81-2	70 - 80
Hexamethylene diisocyanate	822-06-0	< 1

HAZARD STATEMENTS:

H226	Flammable liquid and vapour.
H332	Harmful if inhaled.
H315	Causes skin irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317	May cause an allergic skin reaction.
H335	May cause respiratory irritation.

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.
P284A	In case of inadequate ventilation wear respiratory protection.
P280E	Wear protective gloves.

Response:

P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P342 + P311	If experiencing respiratory symptoms: Call a POISON CENTRE or doctor/physician.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P370 + P378G	In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

25% of the mixture consists of components of unknown acute inhalation toxicity.
Contains 85% of components with unknown hazards to the aquatic environment.

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

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Symbol(s)



Harmful

Contains:

Hexamethylene diisocyanate; Hexamethylene diisocyanate, oligomers

Risk phrases

R10	Flammable.
R20	Harmful by inhalation.
R37	Irritating to respiratory system.
R42/43	May cause sensitisation by inhalation and skin contact.

Safety phrases

S23C	Do not breathe vapour or spray.
S51	Use only in well ventilated areas.
S24	Avoid contact with skin.
S37	Wear suitable gloves.
S45	In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Special provisions concerning the labelling of certain substances

Contains isocyanates. See information supplied by manufacturer.

2.3. Other hazards

Persons previously sensitized to isocyanates may develop a cross-sensitization reaction to other isocyanates.

SECTION 3: Composition/information on ingredients

Ingredient	CAS Nbr	EU Inventory	% by Wt	Classification
Hexamethylene diisocyanate, oligomers	28182-81-2	NLP 500-060-2	70 - 80	Xn:R20; Xi:R37; R43 (Self Classified) Acute Tox. 4, H332; Skin Sens. 1, H317; STOT SE 3, H335 (Self Classified)
2-Methoxy-1-methylethyl acetate	108-65-6	EINECS 203-603-9	5 - 15	R10 (EU) Flam. Liq. 3, H226 (CLP)
Xylene	1330-20-7	EINECS 215-535-7	5 - 15	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	1 - 5	F:R11; Xn:R20 (EU) R52 (Self Classified) Flam. Liq. 2, H225; Acute Tox.

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Hexamethylene diisocyanate	822-06-0	EINECS 212-485-8	< 1	4, H332 (CLP) T:R23; Xi:R36-37-38; R42-43 - Nota 2 (EU) R52 (Self Classified) Acute Tox. 2, H330; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Resp. Sens. 1A, H334; Skin Sens. 1A, H317; STOT SE 3, H335 - Nota 2 (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 such as dry chemical or carbon dioxide to extinguish.

5.2. Special hazards arising from the substance or mixture

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

Hazardous Decomposition or By-Products

Substance

Carbon monoxide.
Carbon dioxide.
Hydrogen cyanide.
Oxides of nitrogen.

Condition

During combustion.
During combustion.
During combustion.
During combustion.

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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. Eliminate all ignition sources if safe to do so. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapours, in accordance with good industrial hygiene practice. Warning: A motor could be an ignition source and could cause flammable gases or vapours in the spill area to burn or explode. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions

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

6.3. Methods and material for containment and cleaning up

Contain spill. Cover spill area with a fire-extinguishing foam. An appropriate aqueous film forming foam (AFFF) is recommended. Pour isocyanate decontaminant solution (90% water, 8% concentrated ammonia, 2% detergent) on spill and allow to react for 10 minutes. Or pour water on spill and allow to react for more than 30 minutes. Cover with absorbent material. 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 container approved for transportation by appropriate authorities, but do not seal the container for 48 hours to avoid pressure build-up. 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. 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. 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 to prevent contamination with water or air. If contamination is suspected, do not reseal container. Store away from heat. Store away from acids. Store away from strong bases. Store away from oxidising agents. Store away from amines.

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/m3(100 ppm);STEL:552 mg/m3(125 ppm)	Skin Notation
2-Methoxy-1-methylethyl acetate	108-65-6	Health and Safety Comm. (UK)	TWA:274 mg/m3(50 ppm);STEL:548 mg/m3(100 ppm)	Skin Notation
Xylene	1330-20-7	Health and Safety Comm. (UK)	TWA:220 mg/m3(50 ppm);STEL:441 mg/m3(100 ppm)	Skin Notation
Free isocyanates	822-06-0	Manufacturer determined	TWA:0.005 ppm;STEL:0.02 ppm	
Free isocyanates	822-06-0	Health and Safety Comm. (UK)	TWA(as NCO):0.02 mg/m3;STEL(as NCO):0.07 mg/m3	Respiratory Sensitizer

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
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

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: Butyl rubber.

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Polyethylene
Polymer laminate

If this product is used in a manner that presents a higher potential for exposure (eg. spraying, high splash potential etc.), then use of protective coveralls may be necessary. Select and use body protection to prevent contact based on the results of an exposure assessment. The following protective clothing material(s) are recommended: Apron – Butyl rubber

Apron – Polyethylene
Apron - polymer laminate

Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:

Half facepiece or full facepiece air-purifying respirator suitable for organic vapours and particulates

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:	Liquid.
Appearance/Odour	Aromatic solvent odour; Clear yellow colour
Odour threshold	<i>No data available.</i>
pH	<i>Not applicable.</i>
Boiling point/boiling range	145 °C
Melting point	<i>Not applicable.</i>
Flammability (solid, gas)	Not applicable.
Explosive properties	Not classified
Oxidising properties	Not classified
Flash point	>=38 °C [<i>Test Method: Closed Cup</i>]
Autoignition temperature	460 °C
Flammable Limits(LEL)	0.9 % volume
Flammable Limits(UEL)	10.8 % volume
Vapour pressure	1,066.6 Pa [<i>@ 20 °C</i>]
Relative density	1.07 [<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	0.25 Pa-s [<i>@ 23 °C</i>]
Density	1.07 g/ml

9.2. Other information

Volatile organic compounds (VOC)	267.5 g/l [<i>Details: EU Definition (Part B)</i>]
Percent volatile	25 % weight

SECTION 10: Stability and reactivity

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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

Alcohols.

Amines.

Strong acids.

Strong bases.

Strong oxidising agents.

Reacts slowly with water forming CO₂

10.6 Hazardous decomposition products

<u>Substance</u>	<u>Condition</u>
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None known.	
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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. May cause target organ effects after inhalation.

Skin contact

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.

3M Scotchkote Urethane Coating XF 129 (Part B)**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.

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 isocyanates may develop a cross-sensitisation reaction to other isocyanates.

Toxicological Data

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

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE >5,000 mg/kg
Overall product	Inhalation-Vapor(4 hr)		No data available; calculated ATE >50 mg/l
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
Hexamethylene diisocyanate, oligomers	Inhalation-Dust/Mist		LC50 estimated to be 1 - 5 mg/l
Hexamethylene diisocyanate, oligomers	Dermal	Rabbit	LD50 > 5,000 mg/kg
Hexamethylene diisocyanate, oligomers	Ingestion	Rat	LD50 > 5,000 mg/kg
2-Methoxy-1-methylethyl acetate	Dermal	Rabbit	LD50 > 5,000 mg/kg
2-Methoxy-1-methylethyl acetate	Inhalation-Vapor (4 hours)	Rat	LC50 > 28.8 mg/l
2-Methoxy-1-methylethyl acetate	Ingestion	Rat	LD50 8,532 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
Hexamethylene diisocyanate	Dermal	Rabbit	LD50 570 mg/kg
Hexamethylene diisocyanate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 0.12 mg/l
Hexamethylene diisocyanate	Ingestion	Rat	LD50 710 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Hexamethylene diisocyanate, oligomers	Rabbit	Mild irritant
2-Methoxy-1-methylethyl acetate	Rabbit	No significant irritation
Xylene	Rabbit	Mild irritant
Ethylbenzene	Rabbit	Mild irritant

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Hexamethylene diisocyanate	Rabbit	Corrosive
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Serious Eye Damage/Irritation

Name	Species	Value
Hexamethylene diisocyanate, oligomers	Rabbit	Moderate irritant
2-Methoxy-1-methylethyl acetate	Rabbit	Mild irritant
Xylene	Rabbit	Mild irritant
Ethylbenzene	Rabbit	Moderate irritant
Hexamethylene diisocyanate	Rabbit	Corrosive

Skin Sensitisation

Name	Species	Value
Hexamethylene diisocyanate, oligomers	Guinea pig	Sensitising
2-Methoxy-1-methylethyl acetate	Guinea pig	Not sensitizing
Ethylbenzene	Human	Not sensitizing
Hexamethylene diisocyanate	Multiple animal species	Sensitising

Respiratory Sensitisation

Name	Species	Value
Hexamethylene diisocyanate, oligomers	similar compounds	Some positive data exist, but the data are not sufficient for classification
Hexamethylene diisocyanate	Human and animal	Sensitising

Germ Cell Mutagenicity

Name	Route	Value
Hexamethylene diisocyanate, oligomers	In Vitro	Not mutagenic
Hexamethylene diisocyanate, oligomers	In vivo	Not mutagenic
2-Methoxy-1-methylethyl acetate	In Vitro	Not mutagenic
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
Hexamethylene diisocyanate	In Vitro	Not mutagenic
Hexamethylene diisocyanate	In vivo	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
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.
Hexamethylene diisocyanate	Inhalation	Rat	Not carcinogenic

Reproductive Toxicity**Reproductive and/or Developmental Effects**

Name	Route	Value	Species	Test result	Exposure Duration
2-Methoxy-1-methylethyl acetate	Ingestion	Not toxic to female reproduction	Rat	NOAEL 1,000 mg/kg/day	prematuring & during gestation

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2-Methoxy-1-methylethyl acetate	Ingestion	Not toxic to male reproduction	Rat	NOAEL 1,000 mg/kg/day	prematuring & during gestation
2-Methoxy-1-methylethyl acetate	Ingestion	Not toxic to development	Rat	NOAEL 1,000 mg/kg/day	prematuring & during gestation
2-Methoxy-1-methylethyl acetate	Inhalation	Not toxic to development	Rat	NOAEL 21.6 mg/l	during organogenesis
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
Hexamethylene diisocyanate	Inhalation	Not toxic to female reproduction	Rat	NOAEL 0.002 mg/l	7 weeks
Hexamethylene diisocyanate	Inhalation	Not toxic to development	Rat	NOAEL 0.002 mg/l	7 weeks
Hexamethylene diisocyanate	Inhalation	Some positive male reproductive data exist, but the data are not sufficient for classification	Rat	NOAEL 0.014 mg/l	4 weeks

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
Hexamethylene diisocyanate, oligomers	Inhalation	respiratory irritation	May cause respiratory irritation		NOAEL Not available	
2-Methoxy-1-methylethyl acetate	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		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	Rat	NOAEL 250 mg/kg	not applicable

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			classification			
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	
Hexamethylene diisocyanate	Inhalation	respiratory irritation	May cause respiratory irritation	Human and animal	NOAEL Not available	
Hexamethylene diisocyanate	Inhalation	blood	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Hexamethylene diisocyanate, oligomers	Inhalation	immune system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL .084 mg/l	2 weeks
Hexamethylene diisocyanate, oligomers	Inhalation	blood	All data are negative	Rat	NOAEL .084 mg/l	2 weeks
2-Methoxy-1-methylethyl acetate	Inhalation	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 16.2 mg/l	9 days
2-Methoxy-1-methylethyl acetate	Inhalation	olfactory system	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
2-Methoxy-1-methylethyl acetate	Inhalation	blood	All data are negative	Multiple animal species	NOAEL 16.2 mg/l	9 days
2-Methoxy-1-methylethyl acetate	Ingestion	endocrine system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1,000 mg/kg/day	44 days
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 through 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	Rat	NOAEL 1.1 mg/l	2 years

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			classification			
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
Hexamethylene diisocyanate	Inhalation	liver kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 0.002 mg/l	3 weeks
Hexamethylene diisocyanate	Inhalation	endocrine system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 0.0014 mg/l	4 weeks
Hexamethylene diisocyanate	Inhalation	blood	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 0.0012 mg/l	2 years
Hexamethylene diisocyanate	Inhalation	nervous system	All data are negative	Rat	NOAEL 0.002 mg/l	7 weeks
Hexamethylene diisocyanate	Inhalation	heart	All data are negative	Rat	NOAEL 0.001 mg/l	90 days

Aspiration Hazard

Name	Value
Xylene	Aspiration hazard
Ethylbenzene	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 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 product test data available.

Material	CAS Nbr	Organism	Type	Exposure	Test endpoint	Test result
2-Methoxy-1-methylethyl acetate	108-65-6	Water flea	Experimental	48 hours	EC50	373 mg/l
2-Methoxy-1-methylethyl acetate	108-65-6	Fathead minnow	Experimental	96 hours	LC50	161 mg/l

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2-Methoxy-1-methylethyl acetate	108-65-6	Water flea	Experimental	21 days	NOEC	>=100 mg/l
Hexamethylene diisocyanate	822-06-0	Ricefish	Experimental	96 hours	LC50	71 mg/l
Hexamethylene diisocyanate	822-06-0	Water flea	Experimental	48 hours	EC50	27 mg/l
Hexamethylene diisocyanate	822-06-0	Green algae	Experimental	72 hours	EC50	15 mg/l
Hexamethylene diisocyanate	822-06-0	Water flea	Experimental	21 days	NOEC	4.2 mg/l
Hexamethylene diisocyanate	822-06-0	Green Algae	Experimental	72 hours	NOEC	10 mg/l
Ethylbenzene	100-41-4	Green Algae	Experimental	96 hours	EC50	3.6 mg/l
Ethylbenzene	100-41-4	Water flea	Experimental	24 hours	EC50	1.81 mg/l
Ethylbenzene	100-41-4	Rainbow trout	Experimental	96 hours	LC50	4.2 mg/l
Xylene	1330-20-7		Data not available or insufficient for classification			
Hexamethylene diisocyanate, oligomers	28182-81-2	Green algae	Unknown	72 hours	EC50	>1,000 mg/l
Hexamethylene diisocyanate, oligomers	28182-81-2	Zebra Fish	Unknown	96 hours	LC50	>1,000 mg/l

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Ethylbenzene	100-41-4	Experimental Photolysis		Photolytic half-life (in air)	4.26 days (t _{1/2})	Other methods
Hexamethylene diisocyanate	822-06-0	Experimental Hydrolysis		Hydrolytic half-life	5 minutes (t _{1/2})	Other methods
2-Methoxy-1-methylethyl acetate	108-65-6	Experimental Biodegradation	28 days	BOD	87.2 % weight	OECD 301C - MITI test (I)
Hexamethylene diisocyanate	822-06-0	Experimental Biodegradation	14 days	BOD	55.5 % weight	OECD 301C - MITI test (I)
Ethylbenzene	100-41-4	Laboratory Biodegradation	14 days	BOD	81 % weight	Other methods
Xylene	1330-20-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Hexamethylene diisocyanate, oligomers	28182-81-2	Modeled Biodegradation	28 days	BOD	28 % weight	OECD 301C - MITI test (I)

12.3 : Bioaccumulative potential

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Xylene	1330-20-7	Data not available or	N/A	N/A	N/A	N/A

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		insufficient for classification				
Hexamethylene diisocyanate	822-06-0	Estimated Bioconcentration		Bioaccumulation factor	158	Estimated: Bioconcentration factor
Ethylbenzene	100-41-4	Experimental BCF - Other		Bioaccumulation factor	15	Other methods
Hexamethylene diisocyanate, oligomers	28182-81-2	Modeled Bioconcentration		Bioaccumulation factor	5	Other methods
2-Methoxy-1-methylethyl acetate	108-65-6	Experimental Bioconcentration		Log Kow	0.36	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

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

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

EU waste code (product as sold)

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

SECTION 14: Transportation information

GR-2001-0903-5, GR-2001-0908-4

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

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

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

SECTION 15: Regulatory information

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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
Xylene	1330-20-7	Gr. 3: Not classifiable	International Agency for Research on Cancer

Global inventory status

Contact 3M for more information. The components of this material are in compliance with the 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 the Korean Toxic Chemical Control Law. Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Australia National Industrial Chemical Notification and Assessment Scheme (NICNAS). Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Japan Chemical Substance Control Law. Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Philippines RA 6969 requirements. Certain restrictions may apply. Contact the selling division for additional information. The components of this product are in compliance with the new substance notification requirements of CEPA. The components of this product are in compliance with the chemical notification requirements of TSCA.

15.2. Chemical Safety Assessment

Not applicable

SECTION 16: Other information

List of relevant H statements

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.

List of relevant R-phrases

R10	Flammable.
R11	Highly flammable.
R20	Harmful by inhalation.
R21	Harmful in contact with skin.
R23	Toxic by inhalation.
R36	Irritating to eyes.
R37	Irritating to respiratory system.
R38	Irritating to skin.
R42	May cause sensitisation by inhalation.
R42/43	May cause sensitisation by inhalation and skin contact.
R43	May cause sensitisation by skin contact.
R52	Harmful to aquatic organisms.

Revision information:

Revision Changes:

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

Section 1: Product identification numbers heading 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.

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: Skin Sensitization Table information was modified.

Section 11: Respiratory Sensitization Table information was modified.

Section 11: Reproductive Toxicity Table information was modified.

Section 5: Fire - Extinguishing media information information was modified.

Section 7: Conditions safe storage information was modified.

Section 13: Standard Phrase Category Waste GHS information was modified.

Label: Signal Word - Header information was added.

Label: Signal Word information was added.

Label: CLP Classification - Header information was added.

Label: CLP Classification information was added.

Label: CLP Classification information was added.

Label: CLP Classification - Header information was added.

Label: CLP Percent Unknown information was added.

Label: CLP Percent Unknown information was added.

Label: Graphic information was added.

Label: Graphic information was added.

Label: Symbol information was added.

Label: Symbol information was added.

Label: CLP Precautionary - Prevention information was added.

Label: CLP Precautionary - Prevention - Header information was added.

Label: CLP Precautionary - Response information was added.

Label: CLP Precautionary - Response - Header information was added.

Label: Precautionary Statement - Header information was added.

CLP: Ingredient table information was added.

Section 2: 2.2 & 2.3. CLP REGULATION heading information was added.

Label: CLP Ingredients table Ingredient heading information was added.

Label: CLP Ingredients table CAS No heading information was added.

Label: CLP Ingredients table Percent by Wt heading information was added.

Section 2: H phrase reference information was added.

Legend description information was added.

BLV Reg Agency Desc 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.

Section 11: Classification disclaimer information was deleted.

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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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