

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 Roof Detailing Compound SDR 655 (Part B)

Product Identification Numbers

GR-2001-4028-7

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

Identified uses

Roof joint coating.

1.3. Details of the supplier of the substance or mixture

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

E Mail: tox.uk@mmm.com
Website: www.3M.com/uk

1.4. Emergency telephone number

+44 (0)1344 858 000

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture CLP REGULATION (EC) No 1272/2008

CLASSIFICATION:

Flammable Liquid, Category 3 - Flam. Liq. 3; H226 Acute Toxicity, Category 4 - Acute Tox. 4; H332

For full text of H phrases, see Section 16.

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

Indication of danger

Flammable; R10

D. . . . 1 . C 1

For full text of R phrases, see Section 16.

2.2. Label elements

CLP REGULATION (EC) No 1272/2008

SIGNAL WORD

WARNING!

Symbols:

GHS02 (Flame) |GHS07 (Exclamation mark) |

Pictograms





Ingredient CAS Nbr % by Wt Xylene 1330-20-7 1 - 10

HAZARD STATEMENTS:

H226 Flammable liquid and vapour.

H332 Harmful if inhaled.

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.

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.

SUPPLEMENTAL INFORMATION

Supplemental Hazard Statements:

EUH208 Contains 4-methyl-m-phenylene diisocyanate. | 2-methyl-m-phenylene diisocyanate.

May produce an allergic reaction.

91% of the mixture consists of components of unknown acute inhalation toxicity. Contains 97% of components with unknown hazards to the aquatic environment.

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

Symbol(s)

None.

Contains:

No ingredients are assigned to the label.

Risk phrases

R10 Flammable.

Safety phrases

S23C Do not breathe vapour or spray.
S51 Use only in well ventilated areas.

2.3. Other hazards

None known.

SECTION 3: Composition/information on ingredients

Ingredient	CAS Nbr	EU Inventory	% by Wt	Classification
Non-Hazardous Ingredients	Mixture		90 - 100	
Xylene	1330-20-7	EINECS 215- 535-7	1 - 10	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)
Carbon black	1333-86-4	EINECS 215- 609-9	< 1	
Ethylbenzene	100-41-4	EINECS 202- 849-4	< 1	F:R11; Xn:R20 (EU) R52 (Self Classified)
				Flam. Liq. 2, H225; Acute Tox. 4, H332 (CLP)
4-methyl-m-phenylene diisocyanate	584-84-9	EINECS 209- 544-5	< 0.1	Carc.Cat.3:R40; T+:R26; Xi:R36-37-38; R42-43; R52/53 (EU)
				Acute Tox. 1, H330; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Resp. Sens. 1A, H334; Skin Sens. 1A, H317; Carc. 2, H351; STOT SE 3, H335; Aquatic Chronic 3, H412 - Nota C (CLP)
2-methyl-m-phenylene diisocyanate	91-08-7	EINECS 202- 039-0	< 0.1	Carc.Cat.3:R40; T+:R26; Xi:R36-37-38; R42-43; R52/53 (EU)
				Acute Tox. 1, H330; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Resp. Sens. 1A, H334; Skin Sens. 1A, H317; Carc. 2, H351; STOT SE 3, H335; Aquatic Chronic 3, H412 - Nota C (CLP)

Please see section 16 for the full text of any R phrases and H statements referred to in this section Please refer to section 15 for the any applicable Notas that have been applied to the above components

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

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation

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

Skin contact

Immediately 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.

5.3. Advice for fire-fighters

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

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

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

6.3. Methods and material for containment and cleaning up

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

possible.

6.4. Reference to other sections

Refer to Section 8 and Section 13 for more information

SECTION 7: Handling and storage

7.1. Precautions for safe handling

For industrial or professional use only. Do not use in a confined area with minimal air exchange. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. 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. Store away from acids. Store away from strong bases. Store away from oxidising agents.

7.3. Specific end use(s)

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

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Ingredient	CAS Nbr	Agency	Limit type	Additional comments
Ethylbenzene	100-41-4	Health and	TWA:441 mg/m3(100	Skin Notation
		Safety Comm.	ppm);STEL:552 mg/m3(125	
		(UK)	ppm)	
Xylene	1330-20-7	Health and	TWA:220 mg/m3(50	Skin Notation
		Safety Comm.	ppm);STEL:441 mg/m3(100	
		(UK)	ppm)	
Carbon black	1333-86-4	Health and	TWA: 3.5 mg/m ³ ; STEL: 7	
		Safety Comm.	mg/m³	
		(UK)		
Free isocyanates	584-84-9	Manufacturer	TWA:0.005 ppm;STEL:0.02	
		determined	ppm	
Free isocyanates	584-84-9	Health and	TWA(as NCO):0.02	Respiratory Sensitizer
		Safety Comm.	mg/m3;STEL(as NCO):0.07	
		(UK)	mg/m3	
Free isocyanates	91-08-7	Manufacturer	TWA:0.005 ppm;STEL:0.02	
•		determined	ppm	
Free isocyanates	91-08-7	Health and	TWA(as NCO):0.02	Respiratory Sensitizer
•		Safety Comm.	mg/m3;STEL(as NCO):0.07	
		(UK)	mg/m3	
Health and Safety Comm (UK) : UK Healt	h and Safaty Cor	nmission	Č	

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

TWA: Time-Weighted-Average STEL: Short Term Exposure Limit

CEIL: Ceiling

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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:

Indirect vented goggles.

Skin/hand protection

Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing.

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

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

Apron - polymer laminate

Rubber boots.

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: Viscous.

Appearance/Odour Odourless; Yellowish colour.

Odour threshold No data available. pH Not applicable.

Dogg 6 of 1

Boiling point/boiling range 137 °C

Melting pointNot applicable.Flammability (solid, gas)Not applicable.Explosive propertiesNot classifiedOxidising propertiesNot classified

Flash point 25 °C [Test Method:Closed Cup]

Autoignition temperature375 °CFlammable Limits(LEL)1 % volumeFlammable Limits(UEL)7 % volumeVapour pressure133.3 Pa [@ 21 °C]

Relative density 1.05 g/cm³ [*Ref Std:*WATER=1]

Water solubility Negligible

Solubility- non-water Nil

Partition coefficient: n-octanol/waterNo data available.Evaporation rateNo data available.Vapour densityNo data available.

Decomposition temperatureNo data available.ViscosityNo data available.

Density 1.04 g/ml

9.2. Other information

Volatile organic compounds (VOC) 100 g/l [Test Method: Estimated] [Details: EU Directive

2004/42/EC annex IIA (j) <500 g/l (from 1.1.2010)]

Percent volatile 6.08 % weight

SECTION 10: Stability and reactivity

10.1 Reactivity

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

10.2 Chemical stability

Stable.

10.3 Possibility of hazardous reactions

Hazardous polymerisation will not occur.

10.4 Conditions to avoid

Sparks and/or flames.

10.5 Incompatible materials

Accelerators

Alcohols.

Amines.

Strong acids.

Strong bases.

Strong oxidising agents.

Moisture.

10.6 Hazardous decomposition products

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Condition **Substance** Carbon monoxide. Not specified. Carbon dioxide. Not specified.

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

Contact with the skin during product use is not expected to result in significant irritation.

Contact with the eyes during product use is not expected to result in significant irritation. Vapours released during curing may cause 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. May cause target organ effects after ingestion.

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.

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

react Toxicity			
Name	Route S	Species	Value
Overall product	Dermal		No data available; calculated ATE >5,000 mg/kg
Overall product	Inhalation-		No data available; calculated ATE49.1 mg/l
	Vapor(4 hr)		-
Overall product	Ingestion		No data available: calculated ATE >5.000 mg/kg

Xylene	Dermal	Rabbit	LD50 > 4,200 mg/kg
Xylene	Inhalation-	Rat	LC50 29 mg/l
	Vapor (4		
	hours)		
Xylene	Ingestion	Rat	LD50 3,523 mg/kg
Ethylbenzene	Dermal	Rabbit	LD50 15,433 mg/kg
Ethylbenzene	Inhalation-	Rat	LC50 17.4 mg/l
	Vapor (4		
	hours)		
Ethylbenzene	Ingestion	Rat	LD50 4,769 mg/kg
Carbon black	Dermal	Rabbit	LD50 > 3,000 mg/kg
Carbon black	Ingestion	Rat	LD50 > 8,000 mg/kg
2-methyl-m-phenylene diisocyanate	Inhalation-	Mouse	LC50 0.12 mg/l
	Vapor (4		
	hours)		
2-methyl-m-phenylene diisocyanate	Dermal	Rabbit	LD50 > 9,400 mg/kg
2-methyl-m-phenylene diisocyanate	Inhalation-	Rat	LC50 0.35 mg/l
	Dust/Mist		
	(4 hours)		
2-methyl-m-phenylene diisocyanate	Ingestion	Rat	LD50 > 5,000 mg/kg
4-methyl-m-phenylene diisocyanate	Inhalation-	Mouse	LC50 0.12 mg/l
	Vapor (4		
	hours)		
4-methyl-m-phenylene diisocyanate	Dermal	Rabbit	LD50 > 9,400 mg/kg
4-methyl-m-phenylene diisocyanate	Inhalation-	Rat	LC50 0.35 mg/l
	Dust/Mist		
	(4 hours)		
4-methyl-m-phenylene diisocyanate	Ingestion	Rat	LD50 > 5,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Xylene	Rabbit	Mild irritant
Ethylbenzene	Rabbit	Mild irritant
Carbon black	Rabbit	No significant irritation
2-methyl-m-phenylene diisocyanate	Rabbit	Irritant
4-methyl-m-phenylene diisocyanate	Rabbit	Irritant

Serious Eye Damage/Irritation

Name	Species	Value
Xylene	Rabbit	Mild irritant
Ethylbenzene	Rabbit	Moderate irritant
Carbon black	Rabbit	No significant irritation
2-methyl-m-phenylene diisocyanate	Rabbit	Corrosive
4-methyl-m-phenylene diisocyanate	Rabbit	Corrosive

Skin Sensitisation

Sim Schsicisation		
Name	Species	Value
Ethylbenzene	Human	Not sensitizing
2-methyl-m-phenylene diisocyanate	Human	Sensitising
	and	
	animal	
4-methyl-m-phenylene diisocyanate	Human	Sensitising
	and	
	animal	

Respiratory Sensitisation

Name	Species	Value
2-methyl-m-phenylene diisocyanate	Human	Sensitising
4-methyl-m-phenylene diisocyanate	Human	Sensitising

Germ Cell Mutagenicity

Germ Cen Mucagement			
Name	Route	Value	
Xylene	In Vitro	Not mutagenic	
Xylene	In vivo	Not mutagenic	

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Ethylbenzene	In vivo	Not mutagenic
Ethylbenzene	In Vitro	Some positive data exist, but the data are not
		sufficient for classification
Carbon black	In Vitro	Not mutagenic
Carbon black	In vivo	Some positive data exist, but the data are not
		sufficient for classification
2-methyl-m-phenylene diisocyanate	In Vitro	Some positive data exist, but the data are not
		sufficient for classification
4-methyl-m-phenylene diisocyanate	In Vitro	Some positive data exist, but the data are not
		sufficient for classification

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.
Carbon black	Dermal	Mouse	Not carcinogenic
Carbon black	Ingestion	Mouse	Not carcinogenic
Carbon black	Inhalation	Rat	Carcinogenic.
2-methyl-m-phenylene diisocyanate	Inhalation	Human and animal	Not carcinogenic
2-methyl-m-phenylene diisocyanate	Ingestion	Multiple animal species	Carcinogenic.
4-methyl-m-phenylene diisocyanate	Inhalation	Human and animal	Not carcinogenic
4-methyl-m-phenylene diisocyanate	Ingestion	Multiple animal species	Carcinogenic.

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
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	premating & during gestation
2-methyl-m-phenylene diisocyanate	Inhalation	Not toxic to female reproduction	Rat	NOAEL .002 mg/l	2 generation
2-methyl-m-phenylene diisocyanate	Inhalation	Not toxic to male reproduction	Rat	NOAEL .002 mg/l	2 generation
2-methyl-m-phenylene diisocyanate	Inhalation	Some positive developmental data exist, but the data are not sufficient for	Rat	NOAEL .004 mg/l	during organogenesis

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		classification			
4-methyl-m-phenylene diisocyanate	Inhalation	Not toxic to female reproduction	Rat	NOAEL .002	2 generation
				mg/l	
4-methyl-m-phenylene diisocyanate	Inhalation	Not toxic to male reproduction	Rat	NOAEL .002	2 generation
				mg/l	
4-methyl-m-phenylene diisocyanate	Inhalation	Some positive developmental data exist,	Rat	NOAEL .004	during
		but the data are not sufficient for		mg/l	organogenesis
		classification			

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
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	
2-methyl-m-phenylene diisocyanate	Inhalation	respiratory irritation	May cause respiratory irritation	Human	NOAEL Not available	occupational exposure
4-methyl-m-phenylene diisocyanate	Inhalation	respiratory irritation	May cause respiratory irritation	Human	NOAEL Not available	occupational exposure

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Xylene	Inhalation	nervous system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0.4 mg/l	4 weeks
Xylene	Inhalation	auditory system	May cause damage to organs though prolonged or repeated exposure	Rat	LOAEL 7.8 mg/l	5 days
Xylene	Inhalation	liver	Some positive data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL Not available	
Xylene	Inhalation	heart endocrine system hematopoietic system muscles kidney and/or bladder respiratory system	All data are negative	Multiple animal species	NOAEL 3.5 mg/l	13 weeks

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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
Carbon black	Inhalation	pneumoconiosis	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
2-methyl-m-phenylene diisocyanate	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL .000006 mg/l	occupational exposure
4-methyl-m-phenylene diisocyanate	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL .000006 mg/l	occupational exposure

Aspiration Hazard

I	
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 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.

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12.1. Toxicity

No product test data available.

Material	CAS Nbr	Organism	Type	Exposure	Test endpoint	Test result
2-methyl-m-	91-08-7	Water flea	Experimental	48 hours	EC50	1.6 mg/l
phenylene						
diisocyanate						
Ethylbenzene	100-41-4	Rainbow trout	Experimental	96 hours	LC50	4.2 mg/l
4-methyl-m-	584-84-9	Water flea	Experimental	48 hours	EC50	1.6 mg/l
phenylene						
diisocyanate						
2-methyl-m-	91-08-7	Crustacea	Experimental	14 days	NOEC	0.8 mg/l
phenylene						
diisocyanate						
4-methyl-m-	584-84-9	Crustacea	Experimental	14 days	NOEC	0.8 mg/l
phenylene						
diisocyanate						
2-methyl-m-	91-08-7	Green algae	Experimental	96 hours	EC50	9.54 mg/l
phenylene						
diisocyanate						
Xylene	1330-20-7		Data not			
			available or			
			insufficient for			
			classification			
Carbon black	1333-86-4		Data not			
			available or			
			insufficient for			
			classification			

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Carbon black	1333-86-4	Data not	N/A	N/A	N/A	N/A
		available or				
		insufficient for				
		classification				
Ethylbenzene	100-41-4	Experimental		Photolytic half-	4.26 days (t	Other methods
		Photolysis		life (in air)	1/2)	
Ethylbenzene	100-41-4	Laboratory	14 days	BOD	81 % weight	Other methods
		Biodegradation				
4-methyl-m-	584-84-9	Experimental		Photolytic half-	4.27 days (t	Other methods
phenylene		Photolysis		life (in air)	1/2)	
diisocyanate						
4-methyl-m-	584-84-9	Experimental	14 days	BOD	0 % weight	OECD 301C - MITI
phenylene		Biodegradation				test (I)
diisocyanate						
2-methyl-m-	91-08-7	Experimental		Photolytic half-	4.27 days (t	Other methods
phenylene		Photolysis		life (in air)	1/2)	
diisocyanate						
2-methyl-m-	91-08-7	Experimental		Hydrolytic	5 days (t 1/2)	Other methods
phenylene		Hydrolysis		half-life		
diisocyanate						
2-methyl-m-	91-08-7	Experimental	14 days	BOD	0 % weight	OECD 301C - MITI

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phenylene	Bio	odegradation		test (I)
diisocyanate				

12.3: Bioaccumulative potential

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Ethylbenzene	100-41-4	Experimental		Bioaccumulati	15	Other methods
		BCF - Other		on factor		
Xylene	1330-20-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
4-methyl-m- phenylene diisocyanate	584-84-9	Experimental BCF-Carp	42 days	Bioaccumulati on factor	<50	OECD 305C- Bioaccum degree fish
2-methyl-m- phenylene diisocyanate	91-08-7	Experimental BCF-Carp	42 days	Bioaccumulati on factor	<50	OECD 305C- Bioaccum degree fish

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

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

EU waste code (product as sold)

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

SECTION 14: Transportation information

GR-2001-4028-7

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

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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

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

Carcinogenicity

<u>Ingredient</u>	CAS Nbr	<u>Classification</u>	Regulation
2-methyl-m-phenylene diisocyanate	91-08-7	Carc. 2	Regulation (EC) No.
			1272/2008, Table 3.1
2-methyl-m-phenylene diisocyanate	91-08-7	Carc.Cat.3	Regulation (EC) No.
			1272/2008, Table 3.2
2-methyl-m-phenylene diisocyanate	91-08-7	Grp. 2B: Possible human	International Agency
		carc.	for Research on Cancer
Carbon black	1333-86-4	Grp. 2B: Possible human	International Agency
		carc.	for Research on Cancer
Ethylbenzene	100-41-4	Grp. 2B: Possible human	International Agency
		carc.	for Research on Cancer
4-methyl-m-phenylene diisocyanate	584-84-9	Carc. 2	Regulation (EC) No.
			1272/2008, Table 3.1
4-methyl-m-phenylene diisocyanate	584-84-9	Carc.Cat.3	Regulation (EC) No.
			1272/2008, Table 3.2
4-methyl-m-phenylene diisocyanate	584-84-9	Grp. 2B: Possible human	International Agency
		carc.	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 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.
H351	Suspected of causing cancer.
H412	Harmful to aquatic life with long lasting effects

List of relevant R-phrases

R10	Flammable.
R11	Highly flammable.
R20	Harmful by inhalation.
R21	Harmful in contact with skin.
R26	Very toxic by inhalation.
R36	Irritating to eyes.

R37 Irritating to respiratory system.

R38 Irritating to skin.

R40 Limited evidence of a carcinogenic effect.
 R42 May cause sensitisation by inhalation.
 R43 May cause sensitisation by skin contact.

R52 Harmful to aquatic organisms.

R52/53 Harmful to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

Revision information:

Revision Changes:

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

Section 1: Product identification numbers heading information was modified.

Section 1: Product identification numbers information was modified.

Section 3: Composition/Information of ingredients table information was modified.

Section 12: Component ecotoxicity information information was modified.

Section 12: Persistence and Degradability information information was modified.

Section 12:Bioccumulative potential information information was modified.

Section 11: Aspiration Hazard 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.

Legend description information was added.

BLV Reg Agency Desc 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.

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

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