Safety Data Sheet

Document group:	29-3495-8	**Version number:**	2.00
Revision date:	04/06/2014	**Supersedes date:**	04/10/2011

Transportation version number: 2.00 (05/04/2012)

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 Scotchkote Urethane Elastomer 80FG 532 Kit

Product Identification Numbers
GR-2001-2084-2

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

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:

29-1401-8, 28-4137-7, 28-4126-0

TRANSPORTATION INFORMATION

GR-2001-2084-2

Component 1
ADR/RID: UN1263, PAINT RELATED MATERIAL, LIMITED QUANTITY, 3., II , (E), ADR Classification Code: F1.
IMDG-CODE: UN1263, PAINT RELATED MATERIAL, 3, II , IMDG-Code segregation code: NONE, LIMITED QUANTITY, EMS: FE,SE.
ICAO/IATA: UN1263, PAINT RELATED MATERIAL, 3., II .

Component 2
ADR/RID: UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE,LIQUID,N.O.S.LIMITED QUANTITY, (6-METHYL-2,4-BIS(METHYLTHIO)PHENYLENE-1,3-DIAMINE), 9., III, (E), ADR Classification Code: M6.
IMDG-CODE: UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE,LIQUID, N.O.S., (6-METHYL-2,4-BIS(METHYLTHIO)PHENYLENE-1,3-DIAMINE), 9., III, IMDG-Code segregation code: NONE, LIMITED QUANTITY, EMS: FA,SF.
ICAO/IATA: UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE,LIQUID,N.O.S., (6-METHYL-2,4-BIS(METHYLTHIO)PHENYLENE-1,3-DIAMINE), 9., III, fish and tree marking may be required (> 5kg/l).

Component 3
ADR/RID: NOT RESTRICTED FOR ROAD (ADR/RID), (--).
IMDG-CODE: NOT RESTRICTED FOR TRANSPORTATION FOR IMDG/GGVSEE, IMDG-Code segregation code: NONE, LIMITED QUANTITY, EMS: --.
ICAO/IATA: NOT RESTRICTED FOR AIR SHIPMENT.

KIT LABEL

2.2. Label elements
CLP REGULATION (EC) No 1272/2008

SIGNAL WORD
DANGER!

Symbols:
GHS02 (Flame) |GHS07 (Exclamation mark) | GHS08 (Health Hazard) |GHS09 (Environment) |

Pictograms

HAZARD STATEMENTS:

H225	Highly flammable liquid and vapour.
H302	Harmful if swallowed.
H319	Causes serious eye irritation.
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.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.
H411	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.
P284A	In case of inadequate ventilation wear respiratory protection.
P280E	Wear protective gloves.
P273	Avoid release to the environment.

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.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
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.

Disposal:

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

Notes on labelling

For ingredient disclosures and percent unknown statements, reference components 28-4126-0, 28-4137-7 & 29-1401-8.

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.
R20/22	Harmful by inhalation and if swallowed.
R36/37/38	Irritating to eyes, respiratory system and skin.
R42/43	May cause sensitisation by inhalation and skin contact.
R67	Vapours may cause drowsiness and dizziness.
R40	Limited evidence of a carcinogenic effect.
R51/53	Toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

Safety phrases

S16	Keep away from sources of ignition - No Smoking.
S23A	Do not breathe vapour.
S36/37	Wear suitable protective clothing and gloves.
S45	In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S61	Avoid release to the environment. Refer to special instructions/safety data sheets.

Special provisions concerning the labelling of certain substances

Contains isocyanates. See information supplied by manufacturer.

Notes on labelling

Nota N applied to CAS # 64742-46-7.

Revision information:
Revision Changes:
Kit: Component document group number(s) information was modified.
Section 2: Risk phrase information information was modified.
Section 1: Product identification numbers heading information was modified.
Copyright information was modified.
Section 1: Initial issue message information was modified.
Telephone header information was modified.
Company Telephone information was modified.
Section 1: Product use information information was added.
Label: Signal Word - Header information was added.
Label: Signal Word information was added.
Label: CLP Classification information was added.
Label: CLP Classification - Header information was added.
Label: CLP Environmental Hazard Statements 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 - Disposal information was added.
Label: CLP Precautionary - Disposal - Header 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.
Section 2: Notes on labelling heading information was added.
Section 15: Label remarks and EU Detergent information was added.
Section 2: 2.2 & 2.3. CLP REGULATION heading information was added.
Label: Graphic Text information was added.
Label: Graphic Text information was added.
Label: Graphic information was added.
Label: Graphic information was added.
Label: Graphic Text information was added.
Section 2: Symbol information was deleted.
Section 2: Symbols heading information was deleted.

Safety Data Sheet

Document group:	28-4137-7	**Version number:**	4.00
Revision date:	14/07/2014	**Supersedes date:**	23/05/2014

Transportation version number: 2.00 (09/12/2010)

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 Elastomer 80FG 532 (Part A)

Product Identification Numbers
GR-2001-0971-2

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:
Acute Toxicity, Category 4 - Acute Tox. 4; H302
Skin Sensitization, Category 1 - Skin Sens. 1; H317
Hazardous to the Aquatic Environment (Chronic), Category 2 - Aquatic Chronic 2; H411

For full text of H phrases, see Section 16.

Dangerous substances(67/548/EEC)/preparations(1999/45/EC) directive
Indication of danger
Harmful; Xn; R22

Sensitizing; R43
Dangerous for the environment; N; R51/53

For full text of R phrases, see Section 16.

2.2. Label elements
CLP REGULATION (EC) No 1272/2008

SIGNAL WORD
WARNING!

Symbols:
GHS07 (Exclamation mark) |GHS09 (Environment) |

Pictograms

Ingredient	CAS Nbr	% by Wt
Propane-1,2-diol, propoxylated	25322-69-4	60 - 70
6-methyl-2,4-bis(methylthio)phenylene-1,3-diamine	106264-79-3	15 - 25

HAZARD STATEMENTS:

H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
H411	Toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

Prevention:

P280E	Wear protective gloves.
P273	Avoid release to the environment.

Response:

P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.

Disposal:

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

22% of the mixture consists of components of unknown acute oral toxicity.

Contains 4% of components with unknown hazards to the aquatic environment.

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

Symbol(s)

Harmful	Dangerous for the environment

Contains:
6-methyl-2,4-bis(methylthio)phenylene-1,3-diamine; Propane-1,2-diol, propoxylated

Risk phrases

R22	Harmful if swallowed.
R43	May cause sensitisation by skin contact.
R51/53	Toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

Safety phrases

S24	Avoid contact with skin.
S37	Wear suitable gloves.
S61	Avoid release to the environment. Refer to special instructions/safety data sheets.

2.3. Other hazards

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

SECTION 3: Composition/information on ingredients

Ingredient	CAS Nbr	EU Inventory	% by Wt	Classification
Propane-1,2-diol, propoxylated	25322-69-4	NLP 500-039-8	60 - 70	Xn:R22 (Self Classified) Acute Tox. 4, H302 (Self Classified)
6-methyl-2,4-bis(methylthio)phenylene-1,3-diamine	106264-79-3	ELINCS 403-240-8	15 - 25	Xn:R22; N:R50/53; R43 (EU) Acute Tox. 4, H302; Skin Sens. 1, H317; Aquatic Acute 1, H400,M=1; Aquatic Chronic 1, H410,M=1 (CLP)
Zeolites	1318-02-1	EINECS 215-283-8	1 - 10	
Non-Hazardous Ingredients	Mixture		1 - 5	
Diisononyl Phthalate	28553-12-0	EINECS 249-079-5	1 - 5	
Carbon black	1333-86-4	EINECS 215-609-9	1 - 5	
N,N-dibenzylhydroxylamine	621-07-8	EINECS 210-667-1	< 1	

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
Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, 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 ordinary combustible material such as water or foam to extinguish.

5.2. Special hazards arising from the substance or mixture
None inherent in this product.

Hazardous Decomposition or By-Products

Substance	Condition
Carbon monoxide.	During combustion.
Carbon dioxide.	During combustion.

5.3. Advice for fire-fighters
No special protective actions for fire-fighters are anticipated.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Evacuate area. 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. 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. Place in a closed 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. Avoid breathing dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Avoid contact with oxidising agents (eg. chlorine, chromic acid etc.) Use personal protective equipment (eg. gloves, respirators…) as required.

7.2. Conditions for safe storage including any incompatibilities
Store away from heat. Store away from acids. Store away from strong bases. Store away from oxidising agents. Store away from areas where product may come into contact with food or pharmaceuticals. 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
Carbon black	1333-86-4	Health and Safety Comm. (UK)	TWA: 3.5 mg/m³; STEL: 7 mg/m³	
Diisononyl Phthalate	28553-12-0	Health and Safety Comm. (UK)	TWA:5 mg/m3	

Health and Safety Comm. (UK) : UK Health and Safety Commission
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling

Biological limit values
No biological limit values exist for any of the components listed in Section 3 of this safety data sheet.

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.

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

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 - polymer laminate

Respiratory protection

Wear respiratory protection if ventilation is inadequate to prevent overexposure. 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:	Thixotropic liquid.
Appearance/Odour	Slight oily odour; Black colour
Odour threshold	*No data available.*
pH	*No data available.*
Boiling point/boiling range	>=167.8 ºC
Melting point	*Not applicable.*
Flammability (solid, gas)	Not applicable.
Explosive properties	Not classified
Oxidising properties	Not classified
Flash point	>=168 ºC [*Test Method:*Closed Cup]
Autoignition temperature	>=355 ºC
Flammable Limits(LEL)	*No data available.*
Flammable Limits(UEL)	*No data available.*
Vapour pressure	<=9.3 Pa [*Details:*Negligible]
Relative density	1.08 [*Ref Std:*WATER=1]
Water solubility	Negligible
Solubility- non-water	*No data available.*
Partition coefficient: n-octanol/water	*No data available.*
Evaporation rate	*No data available.*
Vapour density	*No data available.*
Decomposition temperature	*No data available.*
Viscosity	*No data available.*
Density	1.08 g/ml

9.2. Other information

Volatile organic compounds (VOC)	2.5 g/l [*Test Method:*Estimated] [*Details:*EU Definition (Part A and B mix)]
Percent volatile	0.4 % 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
None known.

10.5 Incompatible materials
Accelerators
Amines.
Strong acids.
Strong bases.
Strong oxidising agents.

10.6 Hazardous decomposition products

Substance	Condition
None known.	

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

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

11.1 Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation
No health effects are expected.

Skin contact
Contact with the skin during product use is not expected to result in significant irritation. Allergic skin reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

Eye contact
Contact with the eyes during product use is not expected to result in significant irritation.

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

Carcinogenicity:
Contains a chemical or chemicals which can cause cancer.

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

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

Acute Toxicity

Name	Route	Species	Value
Overall product	Ingestion		No data available; calculated ATE300 - 2,000 mg/kg
Propane-1,2-diol, propoxylated	Dermal	Rabbit	LD50 > 10,000 mg/kg
Propane-1,2-diol, propoxylated	Ingestion	Rat	LD50 1,000 mg/kg
Zeolites	Dermal	Rabbit	LD50 > 2,000 mg/kg
Zeolites	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 4.57 mg/l
Zeolites	Ingestion	Rat	LD50 > 5,000 mg/kg
Diisononyl Phthalate	Dermal	Rabbit	LD50 > 3,160 mg/kg
Diisononyl Phthalate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 1.7 mg/l
Diisononyl Phthalate	Ingestion	Rat	LD50 > 10,000 mg/kg
Carbon black	Dermal	Rabbit	LD50 > 3,000 mg/kg
Carbon black	Ingestion	Rat	LD50 > 8,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Diisononyl Phthalate	Rabbit	No significant irritation
Carbon black	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Diisononyl Phthalate	Rabbit	Mild irritant
Carbon black	Rabbit	No significant irritation

Skin Sensitisation

Name	Species	Value
Diisononyl Phthalate	Human and animal	Not sensitizing

Respiratory Sensitisation

Name	Species	Value

Germ Cell Mutagenicity

Name	Route	Value
Diisononyl Phthalate	In Vitro	Not mutagenic
Carbon black	In Vitro	Not mutagenic
Carbon black	In vivo	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Diisononyl Phthalate	Ingestion	Multiple animal species	Some positive data exist, but the data are not sufficient for classification
Carbon black	Dermal	Mouse	Not carcinogenic
Carbon black	Ingestion	Mouse	Not carcinogenic
Carbon black	Inhalation	Rat	Carcinogenic.

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
Diisononyl Phthalate	Ingestion	Not toxic to female reproduction	Rat	NOAEL 500 mg/kg/day	2 generation
Diisononyl Phthalate	Ingestion	Not toxic to male reproduction	Rat	NOAEL 500 mg/kg/day	2 generation
Diisononyl Phthalate	Ingestion	Not toxic to development	Rat	NOAEL 1,000 mg/kg/day	during organogenesis

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Diisononyl Phthalate	Dermal	blood | liver | kidney and/or bladder	All data are negative	Rabbit	NOAEL 2,425 mg/kg/day	6 weeks
Diisononyl Phthalate	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL not available	13 weeks
Carbon black	Inhalation	pneumoconiosis	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure

Aspiration Hazard

Name	Value

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
6-methyl-2,4-bis(methylthio) phenylene-1,3-diamine	106264-79-3	Rainbow trout	Experimental	96 hours	LC50	16.9 mg/l
6-methyl-2,4-bis(methylthio) phenylene-1,3-diamine	106264-79-3	Water flea	Experimental	48 hours	EC50	0.9 mg/l
N,N-dibenzylhydro	621-07-8		Data not available or			

xylamine			insufficient for classification			
Carbon black	1333-86-4		Data not available or insufficient for classification			
Diisononyl Phthalate	28553-12-0		Data not available or insufficient for classification			
Propane-1,2-diol, propoxylated	25322-69-4	Inland Silverside	Laboratory	96 hours	LC50	650 mg/l
Zeolites	1318-02-1		Data not available or insufficient for classification			

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Propane-1,2-diol, propoxylated	25322-69-4	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Zeolites	1318-02-1	Experimental Hydrolysis		Hydrolytic half-life	2 months (t 1/2)	Other methods
Carbon black	1333-86-4	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
N,N-dibenzylhydroxylamine	621-07-8	Estimated Biodegradation	28 days	BOD	52 % weight	OECD 301C - MITI test (I)
6-methyl-2,4-bis(methylthio) phenylene-1,3-diamine	106264-79-3	Estimated Biodegradation	28 days	BOD	0 % weight	OECD 301C - MITI test (I)
Diisononyl Phthalate	28553-12-0	Experimental Biodegradation	28 days	BOD	74 % weight	OECD 301C - MITI test (I)

12.3 : Bioaccumulative potential

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Propane-1,2-diol, propoxylated	25322-69-4	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Zeolites	1318-02-1	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Diisononyl Phthalate	28553-12-0	Analogous Compound BCF - Other	56 days	Bioaccumulation factor	<14.4	Other methods

Carbon black	1333-86-4	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
N,N-dibenzylhydroxylamine	621-07-8	Estimated Bioconcentration		Bioaccumulation factor	83	Estimated: Bioconcentration factor
N,N-dibenzylhydroxylamine	621-07-8	Estimated Bioconcentration		Bioaccumulation factor	2.8642	Estimated: Octanol-water partition coefficient
6-methyl-2,4-bis(methylthio)phenylene-1,3-diamine	106264-79-3	Estimated Bioconcentration		Bioaccumulation factor	6.08	Estimated: Bioconcentration factor

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

Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. 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-2001-0971-2

ADR/RID: UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE,LIQUID,N.O.S.LIMITED QUANTITY, (6-METHYL-2,4-BIS(METHYLTHIO)PHENYLENE-1,3-DIAMINE), 9., III, (E), ADR Classification Code: M6.
IMDG-CODE: UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE,LIQUID, N.O.S., (6-METHYL-2,4-BIS(METHYLTHIO)PHENYLENE-1,3-DIAMINE), 9., III, IMDG-Code segregation code: NONE, LIMITED QUANTITY,

EMS: FA,SF.
ICAO/IATA: UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE,LIQUID,N.O.S., (6-METHYL-2,4-BIS(METHYLTHIO)PHENYLENE-1,3-DIAMINE), 9., III, fish and tree marking may be required (> 5kg/l).

SECTION 15: Regulatory information

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

Carcinogenicity

Ingredient	CAS Nbr	Classification	Regulation
Carbon black	1333-86-4	Grp. 2B: Possible human carc.	International Agency for Research on Cancer
Zeolites	1318-02-1	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 Australia National Industrial Chemical Notification and Assessment Scheme (NICNAS). 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

H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
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

R22	Harmful if swallowed.
R43	May cause sensitisation by skin contact.
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.

Revision information:
Revision Changes:
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 5: Fire - Advice for fire fighters information information was modified.
Two-column table displaying the unique list of H Codes and statements (std phrases) for all components of the given material. 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: CLP Environmental Hazard Statements 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 - Disposal information was added.
Label: CLP Precautionary - Disposal - Header 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.

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

Safety Data Sheet

Document group:	28-4126-0	**Version number:**	8.00
Revision date:	25/06/2014	**Supersedes date:**	28/05/2014

Transportation version number: 1.00 (20/10/2010)

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 Elastomer 80FG 532 (Part B)

Product Identification Numbers
GR-2001-0970-4

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:
Respiratory Sensitization, Category 1A - Resp. Sens. 1A; H334
Skin Sensitization, Category 1A - Skin Sens. 1A; H317

For full text of H phrases, see Section 16.

Dangerous substances(67/548/EEC)/preparations(1999/45/EC) directive
Indication of danger
Harmful; Xn; R20
Sensitizing; R42

For full text of R phrases, see Section 16.

2.2. Label elements
CLP REGULATION (EC) No 1272/2008

SIGNAL WORD
DANGER!

Symbols:
GHS08 (Health Hazard) |

Pictograms

Ingredient	CAS Nbr	% by Wt
m-tolylidene diisocyanate	26471-62-5	0 - 0.1

HAZARD STATEMENTS:

H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317	May cause an allergic skin reaction.

PRECAUTIONARY STATEMENTS

Prevention:

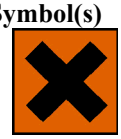
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P284A	In case of inadequate ventilation wear respiratory protection.
P280E	Wear protective gloves.

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.

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

Symbol(s)



Harmful

Contains:
m-tolylidene diisocyanate

Risk phrases

R20	Harmful by inhalation.
R42	May cause sensitisation by inhalation.

Safety phrases

S23A	Do not breathe vapour.

S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

2.3. Other hazards

None known.

SECTION 3: Composition/information on ingredients

Ingredient	CAS Nbr	EU Inventory	% by Wt	Classification
Polypropylene glycol-toluene diisocyanate polymer	Trade Secret		80 - 100	
m-tolylidene diisocyanate	26471-62-5	EINECS 247-722-4	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
Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, 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 ordinary combustible material such as water or foam to extinguish.

5.2. Special hazards arising from the substance or mixture
None inherent in this product.

Hazardous Decomposition or By-Products

Substance	Condition
Carbon monoxide.	During combustion.
Carbon dioxide.	During combustion.
Hydrogen cyanide.	During combustion.
Oxides of nitrogen.	During combustion.

5.3. Advice for fire-fighters
No special protective actions for fire-fighters are anticipated.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
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.

6.2. Environmental precautions
Avoid release to the environment.

6.3. Methods and material for containment and cleaning up
Contain spill. 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. 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 handle until all safety precautions have been read and understood. 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. Wash contaminated clothing before reuse. Avoid contact with oxidising agents (eg. chlorine, chromic acid etc.) Use personal protective equipment (eg. gloves, respirators…) as required.

7.2. Conditions for safe storage including any incompatibilities
Keep container tightly closed to prevent contamination with water or air. If contamination is suspected, do not reseal container. Store away from acids. Store away from 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
Free isocyanates	26471-62-5	Manufacturer determined	TWA:0.005 ppm;STEL:0.02 ppm	
Free isocyanates	26471-62-5	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
No biological limit values exist for any of the components listed in Section 3 of this safety data sheet.

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.

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.
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 - 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:	Viscous liquid
Appearance/Odour	Odourless; Yellowish colour
Odour threshold	*No data available.*
pH	*Not applicable.*
Boiling point/boiling range	>=250 ºC
Melting point	*Not applicable.*
Flammability (solid, gas)	Not applicable.
Explosive properties	Not classified
Oxidising properties	Not classified
Flash point	>=160 ºC [*Test Method:*Closed Cup]
Autoignition temperature	>=400 ºC
Flammable Limits(LEL)	*No data available.*
Flammable Limits(UEL)	*No data available.*
Vapour pressure	<=133.3 Pa [@ 21 ºC]
Relative density	1.11 g/cm3 [*Ref Std:*WATER=1]
Water solubility	Negligible
Solubility- non-water	Nil
Partition coefficient: n-octanol/water	*No data available.*
Evaporation rate	*No data available.*
Vapour density	*No data available.*
Decomposition temperature	*No data available.*
Viscosity	*No data available.*
Density	1.11 g/ml

9.2. Other information

Volatile organic compounds (VOC)	2.5 g/l [*Test Method:*Estimated] [*Details:*EU Definition (Part A and B mix)]
Percent volatile	0 %

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
None known.

10.5 Incompatible materials
Accelerators
Alcohols.
Amines.
Reaction with water, alcohols, and amines is not hazardous if container can vent to the atmosphere to prevent pressure buildup.
Strong acids.
Strong bases.
Strong oxidising agents.

10.6 Hazardous decomposition products

Substance	Condition
None known.	

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

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

11.1 Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation
May be harmful if inhaled. Respiratory tract irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. Allergic respiratory reaction: Signs/symptoms may include difficulty breathing, wheezing, cough, and tightness of chest.

Skin contact
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
Contact with the eyes during product use is not expected to result in significant irritation.

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

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

Name	Route	Species	Value

Overall product	Inhalation-Vapor(4 hr)		No data available; calculated ATE20 - 50 mg/l
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
m-tolylidene diisocyanate	Inhalation-Vapor (4 hours)	Mouse	LC50 0.12 mg/l
m-tolylidene diisocyanate	Dermal	Rabbit	LD50 > 9,400 mg/kg
m-tolylidene diisocyanate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 0.35 mg/l
m-tolylidene diisocyanate	Ingestion	Rat	LD50 > 5,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
m-tolylidene diisocyanate	Rabbit	Irritant

Serious Eye Damage/Irritation

Name	Species	Value
m-tolylidene diisocyanate	Rabbit	Corrosive

Skin Sensitisation

Name	Species	Value
m-tolylidene diisocyanate	Human and animal	Sensitising

Respiratory Sensitisation

Name	Species	Value
m-tolylidene diisocyanate	Human	Sensitising

Germ Cell Mutagenicity

Name	Route	Value
m-tolylidene diisocyanate	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
m-tolylidene diisocyanate	Inhalation	Human and animal	Not carcinogenic
m-tolylidene diisocyanate	Ingestion	Multiple animal species	Carcinogenic.

Reproductive Toxicity

Reproductive and/or Developmental Effects

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

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration

m-tolylidene 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
m-tolylidene diisocyanate	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL .000006 mg/l	occupational exposure

Aspiration Hazard

Name	Value

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
Polypropylene glycol-toluene diisocyanate polymer	Trade Secret		Data not available or insufficient for classification			
m-tolylidene diisocyanate	26471-62-5	Water flea	Experimental	48 hours	EC50	1.6 mg/l
m-tolylidene diisocyanate	26471-62-5	Zebra Fish	Experimental	96 hours	LC50	392 mg/l
m-tolylidene diisocyanate	26471-62-5	Green Algae	Experimental	96 hours	EC50	9.54 mg/l
m-tolylidene diisocyanate	26471-62-5	Ricefish	Experimental	28 days	NOEC	40.3 mg/l
m-tolylidene diisocyanate	26471-62-5	Crustacea	Experimental	14 days	NOEC	0.8 mg/l

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Polypropylene glycol-toluene diisocyanate polymer	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
m-tolylidene diisocyanate	26471-62-5	Experimental Photolysis		Photolytic half-life (in air)	4.27 days (t 1/2)	Other methods
m-tolylidene diisocyanate	26471-62-5	Experimental Hydrolysis		Hydrolytic half-life	5 days (t 1/2)	Other methods
m-tolylidene diisocyanate	26471-62-5	Experimental Biodegradation	14 days	BOD	0 % weight	OECD 301C - MITI test (I)

12.3 : Bioaccumulative potential

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Polypropylene glycol-toluene diisocyanate polymer	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
m-tolylidene diisocyanate	26471-62-5	Experimental BCF-Carp	42 days	Bioaccumulation 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. Proper destruction may require the use of additional fuel during incineration processes. 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)
080199 Wastes not otherwise specified

SECTION 14: Transportation information

GR-2001-0970-4

Not hazardous for transportation

SECTION 15: Regulatory information

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

Carcinogenicity

Ingredient	CAS Nbr	Classification	Regulation
m-tolylidene diisocyanate	26471-62-5	Carc. 2	Regulation (EC) No.

m-tolylidene diisocyanate	26471-62-5	Carc.Cat.3	1272/2008, Table 3.1 Regulation (EC) No.
m-tolylidene diisocyanate	26471-62-5	Grp. 2B: Possible human carc.	1272/2008, Table 3.2 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

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H330	Fatal 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

R20	Harmful by inhalation.
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.
R52/53	Harmful to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

Revision information:
Revision Changes:
Section 12: Component ecotoxicity information information was modified.
Section 12: Persistence and Degradability information information was modified.
Section 5: Fire - Advice for fire fighters information information was modified.

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

Safety Data Sheet

Document group:	29-1401-8	**Version number:**	8.00
Revision date:	11/04/2014	**Supersedes date:**	24/02/2014

Transportation version number: 1.00 (16/02/2011)

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 Scotchkote Urethane Elastomer Primer 075

Product Identification Numbers
GR-2001-0972-0 GR-2001-0973-8

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

Identified uses
Coating.

1.3. Details of the supplier of the substance or mixture
Address: 3M United Kingdom PLC, 3M Centre, Cain Road, Bracknell, Berkshire, RG12 8HT.

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

1.4. Emergency telephone number
+44 (0)1344 858 000

SECTION 2: Hazard identification

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

CLASSIFICATION:
Flammable Liquid, Category 2 - Flam. Liq. 2; H225
Serious Eye Damage/Eye Irritation, Category 2 - Eye Irrit. 2; H319
Skin Corrosion/Irritation, Category 2 - Skin Irrit. 2; H315
Respiratory Sensitization, Category 1 - Resp. Sens. 1; H334
Skin Sensitization, Category 1 - Skin Sens. 1; H317
Carcinogenicity, Category 2 - Carc. 2; H351
Specific Target Organ Toxicity-Single Exposure, Category 3 - STOT SE 3; H335
Specific Target Organ Toxicity-Single Exposure, Category 3 - STOT SE 3; H336

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
Carcinogenic; Carc. Cat. 3; R40
Irritant; Xi; R36/37/38
Sensitizing; R42/43
R67

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
Butanone	78-93-3	70 - 80
4,4'-methylenediphenyl diisocyanate	101-68-8	1 - 5
Diphenylmethane-2,4'-diisocyanate	5873-54-1	1 - 5

HAZARD STATEMENTS:

H225	Highly flammable liquid and vapour.
H319	Causes serious eye irritation.
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.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.

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.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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 and solids such as dry chemical or carbon dioxide to extinguish.

25% of the mixture consists of components of unknown acute inhalation toxicity.

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

Symbol(s)


Highly Flammable


Harmful

Contains:
Diphenylmethane-2,4'-diisocyanate; 4,4'-methylenediphenyl diisocyanate

Risk phrases

R11	Highly flammable.
R36/37/38	Irritating to eyes, respiratory system and skin.
R42/43	May cause sensitisation by inhalation and skin contact.
R67	Vapours may cause drowsiness and dizziness.
R40	Limited evidence of a carcinogenic effect.

Safety phrases

S16	Keep away from sources of ignition - No Smoking.
S23A	Do not breathe vapour.
S36/37	Wear suitable protective clothing and 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
Butanone	78-93-3	EINECS 201-159-0	70 - 80	F:R11; Xi:R36; R66; R67 (EU) Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336; EUH066 (CLP)
Non-hazardous ingredients	Mixture		15 - 30	
4,4'-methylenediphenyl diisocyanate	101-68-8	EINECS 202-966-0	1 - 5	Carc.Cat.3:R40; Xn:R20-48/20; Xi:R36-37-38; R42-43 - Nota 2,C (EU) Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319;

				Resp. Sens. 1, H334; Skin Sens. 1, H317; Carc. 2, H351; STOT SE 3, H335; STOT RE 2, H373 - Nota 2,C (CLP)
Diphenylmethane-2,4'-diisocyanate	5873-54-1	EINECS 227-534-9	1 - 5	Carc.Cat.3:R40; Xn:R20-48/20; Xi:R36-37-38; R42-43 - Nota 2,C (EU) Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Resp. Sens. 1, H334; Skin Sens. 1, H317; Carc. 2, H351; STOT SE 3, H335; STOT RE 2, H373 - Nota 2,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. Remove contact lenses if easy to do. Continue rinsing. 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

Substance	Condition
Carbon monoxide.	During combustion.

Carbon dioxide.	During combustion.
Hydrogen cyanide.	During combustion.
Oxides of nitrogen.	During combustion.

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

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Evacuate area. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Ventilate the area with fresh air. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions
Avoid release to the environment.

6.3. Methods and material for containment and cleaning up
Contain spill. 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. 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. Wash contaminated clothing before reuse. Avoid contact with oxidising agents (eg. chlorine, chromic acid etc.) Wear low static or properly grounded shoes. 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 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
Free isocyanates	101-68-8	Manufacturer determined	TWA:0.005 ppm;STEL:0.02 ppm	
Free isocyanates	101-68-8	Health and Safety Comm. (UK)	TWA(as NCO):0.02 mg/m3;STEL(as NCO):0.07 mg/m3	Respiratory Sensitizer
Free isocyanates	5873-54-1	Manufacturer determined	TWA:0.005 ppm;STEL:0.02 ppm	
Free isocyanates	5873-54-1	Health and Safety Comm. (UK)	TWA(as NCO):0.02 mg/m3;STEL(as NCO):0.07 mg/m3	Respiratory Sensitizer
Butanone	78-93-3	Health and Safety Comm. (UK)	TWA: 600 mg/m³ (200 ppm); STEL: 899 mg/m³ (300 ppm)	Skin Notation

Health and Safety Comm. (UK) : UK Health and Safety Commission
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling

Biological limit values

Ingredient	CAS Nbr	Agency	Determinant	Biological Specimen	Sampling Time	Value	Additional comments
Butanone	78-93-3	UK EH40 BMGVs	Butan-2-one	Urine	EOS	70 umol/L	

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: Butyl rubber.
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 - 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	Pungent Solvent odour; Clear Amber colour
Odour threshold	*No data available.*
pH	*Not applicable.*
Boiling point/boiling range	>=80 ºC
Melting point	*Not applicable.*
Flammability (solid, gas)	Not applicable.
Explosive properties	Not classified
Oxidising properties	Not classified
Flash point	-7 ºC [*Test Method:*Closed Cup]
Autoignition temperature	515 ºC
Flammable Limits(LEL)	1.8 % volume
Flammable Limits(UEL)	11.5 % volume
Vapour pressure	10,399.1 Pa [@ 20 ºC]
Relative density	0.870 [*Ref Std:*WATER=1]
Water solubility	Negligible
Solubility- non-water	*No data available.*
Partition coefficient: n-octanol/water	*No data available.*
Evaporation rate	2.7 [*Ref Std:*BUOAC=1]
Vapour density	2.5 [*Ref Std:*AIR=1]
Decomposition temperature	*No data available.*
Viscosity	< 0.001 Pa-s
Density	0.87 g/ml

9.2. Other information

Volatile organic compounds (VOC)	652.5 g/l
Percent volatile	75 % 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
Heat.
Sparks and/or flames.
Temperatures above the boiling point.

10.5 Incompatible materials
Alcohols.
Combustibles.
Reaction with water, alcohols, and amines is not hazardous if container can vent to the atmosphere to prevent pressure buildup.
Strong acids.
Strong oxidising agents.

10.6 Hazardous decomposition products

Substance	Condition
None known.	

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. Allergic respiratory reaction: Signs/symptoms may include difficulty breathing, wheezing, cough, and tightness of chest. May cause target organ effects after inhalation.

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

Eye contact
Severe eye irritation: Signs/symptoms may include significant redness, swelling, pain, tearing, cloudy appearance of the cornea, and impaired vision.

Ingestion

May be harmful if swallowed.
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:
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:
Respiratory effects: Signs/symptoms may include cough, shortness of breath, chest tightness, wheezing, increased heart rate, bluish coloured skin (cyanosis), sputum production, changes in lung function tests, and respiratory failure.

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	Inhalation-Vapor(4 hr)		No data available; calculated ATE20 - 50 mg/l
Overall product	Ingestion		No data available; calculated ATE2,000 - 5,000 mg/kg
Butanone	Dermal	Rabbit	LD50 > 8,050 mg/kg
Butanone	Inhalation-Vapor (4 hours)	Rat	LC50 34.5 mg/l
Butanone	Ingestion	Rat	LD50 2,737 mg/kg
Diphenylmethane-2,4'-diisocyanate	Inhalation-Vapor		LC50 estimated to be 10 - 20 mg/l
4,4'-methylenediphenyl diisocyanate	Inhalation-Vapor		LC50 estimated to be 10 - 20 mg/l
Diphenylmethane-2,4'-diisocyanate	Dermal	Rabbit	LD50 > 5,000 mg/kg
4,4'-methylenediphenyl diisocyanate	Dermal	Rabbit	LD50 > 5,000 mg/kg
Diphenylmethane-2,4'-diisocyanate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 0.369 mg/l
Diphenylmethane-2,4'-diisocyanate	Ingestion	Rat	LD50 31,600 mg/kg
4,4'-methylenediphenyl diisocyanate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 0.369 mg/l
4,4'-methylenediphenyl diisocyanate	Ingestion	Rat	LD50 31,600 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Butanone	Rabbit	Minimal irritation
Diphenylmethane-2,4'-diisocyanate	official classification	Irritant
4,4'-methylenediphenyl diisocyanate	official classification	Irritant

Serious Eye Damage/Irritation

Name	Species	Value
Butanone	Rabbit	Severe irritant
Diphenylmethane-2,4'-diisocyanate	official	Severe irritant

	classification	
4,4'-methylenediphenyl diisocyanate	official classification	Severe irritant

Skin Sensitisation

Name	Species	Value
Diphenylmethane-2,4'-diisocyanate	official classification	Sensitising
4,4'-methylenediphenyl diisocyanate	official classification	Sensitising

Respiratory Sensitisation

Name	Species	Value
Diphenylmethane-2,4'-diisocyanate	Human	Sensitising
4,4'-methylenediphenyl diisocyanate	Human	Sensitising

Germ Cell Mutagenicity

Name	Route	Value
Butanone	In Vitro	Not mutagenic
Diphenylmethane-2,4'-diisocyanate	In Vitro	Some positive data exist, but the data are not sufficient for classification
4,4'-methylenediphenyl diisocyanate	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Butanone	Inhalation	Human	Not carcinogenic
Diphenylmethane-2,4'-diisocyanate	Inhalation	Rat	Some positive data exist, but the data are not sufficient for classification
4,4'-methylenediphenyl diisocyanate	Inhalation	Rat	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
Butanone	Inhalation	Not toxic to female reproduction	Rat	NOAEL 14.7 mg/l	90 days
Butanone	Inhalation	Not toxic to male reproduction	Rat	NOAEL 14.7 mg/l	90 days
Butanone	Inhalation	Some positive developmental data exist, but the data are not sufficient for classification	Rat	LOAEL 8.8 mg/l	during gestation
Diphenylmethane-2,4'-diisocyanate	Inhalation	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 0.004 mg/l	during organogenesis
4,4'-methylenediphenyl diisocyanate	Inhalation	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 0.004 mg/l	during organogenesis

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Butanone	Inhalation	central nervous system depression	May cause drowsiness or dizziness	official classification	NOAEL Not available	
Butanone	Inhalation	respiratory irritation	Some positive data exist, but the	Human	NOAEL Not	

			data are not sufficient for classification		available	
Butanone	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL Not available	not applicable
Butanone	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 1,080 mg/kg	not applicable
Diphenylmethane-2,4'-diisocyanate	Inhalation	respiratory irritation	May cause respiratory irritation	official classification	NOAEL Not available	
4,4'-methylenediphenyl diisocyanate	Inhalation	respiratory irritation	May cause respiratory irritation	official classification	NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Butanone	Dermal	nervous system	All data are negative	Guinea pig	NOAEL Not available	31 weeks
Butanone	Inhalation	liver | kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 14.7 mg/l	90 days
Butanone	Inhalation	heart | endocrine system | bone, teeth, nails, and/or hair | hematopoietic system | immune system | muscles	All data are negative	Rat	NOAEL 14.7 mg/l	90 days
Butanone	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL Not available	7 days
Butanone	Ingestion	nervous system	All data are negative	Rat	NOAEL 173 mg/kg/day	90 days
Diphenylmethane-2,4'-diisocyanate	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0.004 mg/l	13 weeks
4,4'-methylenediphenyl diisocyanate	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0.004 mg/l	13 weeks

Aspiration Hazard

Name	Value

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
Butanone	78-93-3	Water flea	Experimental	21 days	NOEC	100 mg/l
Butanone	78-93-3	Green algae	Experimental	72 hours	NOEC	93 mg/l
Butanone	78-93-3	Ricefish	Experimental	96 hours	LC50	>100 mg/l

4,4'-methylenediphenyl diisocyanate	101-68-8		Data not available or insufficient for classification			
Diphenylmethane-2,4'-diisocyanate	5873-54-1	Water flea	Estimated	24 hours	EC50	>500 mg/l

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Butanone	78-93-3	Experimental Biodegradation	20 days	BOD	89 % weight	Other methods
Butanone	78-93-3	Estimated Photolysis		Photolytic half-life (in air)	2.8 days (t 1/2)	Other methods
4,4'-methylenediphenyl diisocyanate	101-68-8	Experimental Hydrolysis		Hydrolytic half-life	<2 hours (t 1/2)	Other methods
4,4'-methylenediphenyl diisocyanate	101-68-8	Experimental Biodegradation	28 days	BOD	0 % weight	OECD 301C - MITI test (I)
Diphenylmethane-2,4'-diisocyanate	5873-54-1	Estimated Hydrolysis		Hydrolytic half-life	<2 hours (t 1/2)	Other methods
Diphenylmethane-2,4'-diisocyanate	5873-54-1	Estimated Biodegradation	28 days	BOD	0 % weight	OECD 301C - MITI test (I)

12.3 : Bioaccumulative potential

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Butanone	78-93-3	Experimental Bioconcentration		Log Kow	0.29	Other methods
4,4'-methylenediphenyl diisocyanate	101-68-8	Experimental BCF-Carp	28 days	Bioaccumulation factor	200	Other methods
Diphenylmethane-2,4'-diisocyanate	5873-54-1	Estimated BCF-Carp	28 days	Bioaccumulation factor	200	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. 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)
080501* Waste isocyanates

SECTION 14: Transportation information

GR-2001-0972-0, GR-2001-0973-8

ADR/RID: UN1263, PAINT RELATED MATERIAL, LIMITED QUANTITY, 3., II , (E), ADR Classification Code: F1.
IMDG-CODE: UN1263, PAINT RELATED MATERIAL, 3, II , IMDG-Code segregation code: NONE, LIMITED QUANTITY, EMS: FE,SE.
ICAO/IATA: UN1263, PAINT RELATED MATERIAL, 3., II .

SECTION 15: Regulatory information

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

Carcinogenicity

Ingredient	CAS Nbr	Classification	Regulation
Diphenylmethane-2,4'-diisocyanate	5873-54-1	Carc. 2	Regulation (EC) No. 1272/2008, Table 3.1
Diphenylmethane-2,4'-diisocyanate	5873-54-1	Carc.Cat.3	Regulation (EC) No. 1272/2008, Table 3.2
4,4'-methylenediphenyl diisocyanate	101-68-8	Carc. 2	Regulation (EC) No. 1272/2008, Table 3.1
4,4'-methylenediphenyl diisocyanate	101-68-8	Carc.Cat.3	Regulation (EC) No. 1272/2008, Table 3.2
4,4'-methylenediphenyl diisocyanate	101-68-8	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 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

EUH066	Repeated exposure may cause skin dryness or cracking.
H225	Highly flammable liquid and vapour.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure.

List of relevant R-phrases

R11	Highly flammable.
R20	Harmful by inhalation.
R36	Irritating to eyes.
R36/37/38	Irritating to eyes, respiratory system and skin.
R37	Irritating to respiratory system.
R38	Irritating to skin.
R40	Limited evidence of a carcinogenic effect.
R42	May cause sensitisation by inhalation.
R42/43	May cause sensitisation by inhalation and skin contact.
R43	May cause sensitisation by skin contact.
R48/20	Harmful: danger of serious damage to health by prolonged exposure through inhalation.
R66	Repeated exposure may cause skin dryness or cracking.
R67	Vapours may cause drowsiness and dizziness.

Revision information:
Revision Changes:
Section 1: Product identification numbers heading 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.
CLP: Ingredient table information was modified.
Section 11: Acute 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