Safety Data Sheet

Document group:	28-4563-4	**Version number:**	3.00
Revision date:	15/09/2014	**Supersedes date:**	10/07/2012

Transportation version number: 5.00 (26/08/2013)

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 Ceramic Lining FG 514 (Grey) (Kit)

Product Identification Numbers
GR-2001-2061-0

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

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:

28-0954-9, 25-2225-8

TRANSPORTATION INFORMATION

GR-2001-2061-0

Component 1
ADR/RID: UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE,LIQUID,N.O.S.LIMITED QUANTITY, (POLYMETHYLENE POLYPHENYLENE ISOCYANATE), 9., III, (E), ADR Classification Code: M6.
IMDG-CODE: UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE,LIQUID, N.O.S., (POLYMETHYLENE

POLYPHENYLENE ISOCYANATE), 9., III, IMDG-Code segregation code: NONE, LIMITED QUANTITY, EMS: FA,SF.
ICAO/IATA: UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE,LIQUID,N.O.S., (POLYMETHYLENE POLYPHENYLENE ISOCYANATE), 9., III, fish and tree marking may be required (> 5kg/l).

Component 2
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:
GHS07 (Exclamation mark) | GHS08 (Health Hazard) |GHS09 (Environment) |

Pictograms

HAZARD STATEMENTS:

H332	Harmful if inhaled.
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.
H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure: respiratory system
H410	Very toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

Prevention:

P260E	Do not breathe vapour or 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.

Disposal:

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

Refer to Safety Data Sheet for component % unknown values (www.3M.com/msds).

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

Symbol(s)


Harmful


Dangerous for the environment

Contains:
Consult the component labels for disclosable ingredients.

Risk phrases

R20	Harmful by inhalation.
R36/37/38	Irritating to eyes, respiratory system and skin.
R42/43	May cause sensitisation by inhalation and skin contact.
R48/20	Harmful: danger of serious damage to health by prolonged exposure through inhalation.
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

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

Revision information:
Revision Changes:
Section 1: Product identification numbers heading information was modified.
Copyright information was modified.
Telephone header information was modified.
Company Telephone information was modified.
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 Target Organ Hazard Statement 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 1: Identified uses header information was added.
Section 2: 2.2 & 2.3. CLP REGULATION heading 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.
Label: CLP Percent Unknown - Kit information was added.
Section 2: Symbol information was deleted.
Section 2: Symbols heading information was deleted.

Safety Data Sheet

Document group:	25-2225-8	**Version number:**	10.00
Revision date:	15/09/2014	**Supersedes date:**	04/04/2014

Transportation version number: 3.00 (26/08/2013)

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 Ceramic EG 515 / FG 514 (Part B)

Product Identification Numbers
GR-2001-0945-6

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

Identified uses
Coating.

1.3. Details of the supplier of the substance or mixture

Address: 3M United Kingdom PLC, 3M Centre, Cain Road, Bracknell, Berkshire, RG12 8HT.
Telephone: +44 (0)1344 858 000
E Mail: tox.uk@mmm.com
Website: www.3M.com/uk

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

SECTION 2: Hazard identification

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

CLASSIFICATION:
Acute Toxicity, Category 4 - Acute Tox. 4; H332
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-Repeated Exposure, Category 2 - STOT RE 2; H373
Hazardous to the Aquatic Environment (Chronic), Category 1 - Aquatic Chronic 1; H410

For full text of H phrases, see Section 16.

Dangerous substances(67/548/EEC)/preparations(1999/45/EC) directive
Indication of danger
Carcinogenic; Carc. Cat. 3; R40
Harmful; Xn; R20
Irritant; Xi; R36/37/38
Sensitizing; R42/43
Harmful; Xn; R48/20
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
DANGER!

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

Pictograms

Ingredient	CAS Nbr	% by Wt
Polymethylene polyphenylene isocyanate	9016-87-9	30 - 60
4,4'-methylenediphenyl diisocyanate	101-68-8	35 - 45
Diphenylmethane-2,4'-diisocyanate	5873-54-1	10 - 20
2,2'-methylenediphenyl diisocyanate	2536-05-2	1 - 5

HAZARD STATEMENTS:

H332	Harmful if inhaled.
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.
H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure: respiratory system
H410	Very toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

Prevention:

P260E	Do not breathe vapour or 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.

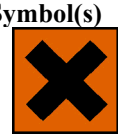
Disposal:

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

1% of the mixture consists of components of unknown acute inhalation toxicity.

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

Symbol(s)



Harmful

Dangerous for the environment

Contains:
2,2'-methylenediphenyl diisocyanate; Diphenylmethane-2,4'-diisocyanate; 4,4'-methylenediphenyl diisocyanate; Polymethylene polyphenylene isocyanate

Risk phrases

R20	Harmful by inhalation.
R36/37/38	Irritating to eyes, respiratory system and skin.
R42/43	May cause sensitisation by inhalation and skin contact.
R48/20	Harmful: danger of serious damage to health by prolonged exposure through inhalation.
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

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

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
Polymethylene polyphenylene isocyanate	9016-87-9		30 - 60	Carc.Cat.3:R40; Xn:R20-48/20; Xi:R36-37-38; N:R51/53; R42-43 (Self Classified) 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; Aquatic Chronic 1, H410,M=10 (Self Classified)
4,4'-methylenediphenyl diisocyanate	101-68-8	EINECS 202-966-0	35 - 45	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	10 - 20	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)
2,2'-methylenediphenyl diisocyanate	2536-05-2	EINECS 219-799-4	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)
Chlorobenzene	108-90-7	EINECS 203-628-5	0 - 1	Xn:R20; N:R51/53; R10 (EU) Flam. Liq. 3, H226; Acute Tox. 4, H332; Aquatic Acute 1, H400,M=1; Aquatic Chronic 2, H411 (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 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 Chloride	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
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. For larger spills, cover drains and build dykes to prevent entry into sewer systems or bodies of water.

6.3. Methods and material for containment and cleaning up

Contain spill. 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. 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 use in a confined area with minimal air exchange. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Avoid contact with oxidising agents (eg. chlorine, chromic acid etc.)

7.2. Conditions for safe storage including any incompatibilities
Store in a well-ventilated place. Keep cool. Keep container tightly closed to prevent contamination with water or air. If contamination is suspected, do not reseal container. Store away from heat. Store away from acids. Store away from strong bases. Store away from oxidising agents. Store away from amines.

7.3. Specific end use(s)
See information in Section 7.1 and 7.2 for handling and storage recommendations. See Section 8 for exposure controls and personal protection recommendations.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits
If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

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
Chlorobenzene	108-90-7	Health and Safety Comm. (UK)	TWA:4.7 mg/m3(1 ppm);STEL:14 mg/m3(3 ppm)	Skin Notation
Free isocyanates	2536-05-2	Manufacturer determined	TWA:0.005 ppm;STEL:0.02 ppm	
Free isocyanates	2536-05-2	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

Free isocyanates	9016-87-9	Manufacturer determined	TWA:0.005 ppm;STEL:0.02 ppm	
Free isocyanates	9016-87-9	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:
Full face shield.
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: Nitrile rubber.

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 – Nitrile

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	Brown; Musty odour.
Odour threshold	*No data available.*

pH	*No data available.*
Boiling point/boiling range	> 300 ºC
Melting point	*Not applicable.*
Flammability (solid, gas)	Not applicable.
Explosive properties	Not classified
Oxidising properties	Not classified
Flash point	229 ºC [*Test Method:*Pensky-Martens Closed Cup]
Autoignition temperature	> 500 ºC
Flammable Limits(LEL)	*Not applicable.*
Flammable Limits(UEL)	*Not applicable.*
Vapour pressure	1,100 Pa [@ 20 ºC]
Relative density	1.22 g/ml [*Ref Std:*WATER=1]
Water solubility	Negligible
Solubility- non-water	*No data available.*
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	0.1 Pa-s [@ 20 ºC]
Density	1.22 g/cm3 [@ 20 ºC]

9.2. Other information

Volatile organic compounds (VOC)	0 g/l [*Test Method:*Estimated] [*Details:*Nil based on EU VOC definition]
Percent volatile	Negligible
VOC less H2O & exempt solvents	*Not applicable.*

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.

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

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

Target Organ Effects:

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	Dermal		No data available; calculated ATE >5,000 mg/kg
Overall product	Inhalation-Vapor(4 hr)		No data available; calculated ATE10 - 20 mg/l
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
Polymethylene polyphenylene isocyanate	Inhalation-Vapor		LC50 estimated to be 10 - 20 mg/l
Polymethylene polyphenylene isocyanate	Dermal	Rabbit	LD50 > 5,000 mg/kg
Polymethylene polyphenylene isocyanate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 0.369 mg/l

Polymethylene polyphenylene isocyanate	Ingestion	Rat	LD50 31,600 mg/kg
4,4'-methylenediphenyl diisocyanate	Inhalation-Vapor		LC50 estimated to be 10 - 20 mg/l
4,4'-methylenediphenyl diisocyanate	Dermal	Rabbit	LD50 > 5,000 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
Diphenylmethane-2,4'-diisocyanate	Inhalation-Vapor		LC50 estimated to be 10 - 20 mg/l
Diphenylmethane-2,4'-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
2,2'-methylenediphenyl diisocyanate	Inhalation-Vapor		LC50 estimated to be 10 - 20 mg/l
2,2'-methylenediphenyl diisocyanate	Dermal	Rabbit	LD50 > 5,000 mg/kg
2,2'-methylenediphenyl diisocyanate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 0.369 mg/l
2,2'-methylenediphenyl diisocyanate	Ingestion	Rat	LD50 31,600 mg/kg
Chlorobenzene	Dermal	Rabbit	LD50 2,212 mg/kg
Chlorobenzene	Inhalation-Vapor (4 hours)	Rat	LC50 16.7 mg/l
Chlorobenzene	Ingestion	Rat	LD50 1,419 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Polymethylene polyphenylene isocyanate	official classification	Irritant
4,4'-methylenediphenyl diisocyanate	official classification	Irritant
Diphenylmethane-2,4'-diisocyanate	official classification	Irritant
2,2'-methylenediphenyl diisocyanate	official classification	Irritant
Chlorobenzene	Rabbit	Irritant

Serious Eye Damage/Irritation

Name	Species	Value
Polymethylene polyphenylene isocyanate	official classification	Severe irritant
4,4'-methylenediphenyl diisocyanate	official classification	Severe irritant
Diphenylmethane-2,4'-diisocyanate	official classification	Severe irritant
2,2'-methylenediphenyl diisocyanate	official classification	Severe irritant
Chlorobenzene	Rabbit	Mild irritant

Skin Sensitisation

Name	Species	Value
Polymethylene polyphenylene isocyanate	official classification	Sensitising

4,4'-methylenediphenyl diisocyanate	official classification	Sensitising
Diphenylmethane-2,4'-diisocyanate	official classification	Sensitising
2,2'-methylenediphenyl diisocyanate	official classification	Sensitising
Chlorobenzene	Multiple animal species	Not sensitizing

Respiratory Sensitisation

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

Germ Cell Mutagenicity

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

Carcinogenicity

Name	Route	Species	Value
Polymethylene polyphenylene isocyanate	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
Diphenylmethane-2,4'-diisocyanate	Inhalation	Rat	Some positive data exist, but the data are not sufficient for classification
2,2'-methylenediphenyl diisocyanate	Inhalation	Rat	Some positive data exist, but the data are not sufficient for classification
Chlorobenzene	Ingestion	Multiple animal species	Not carcinogenic

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
Polymethylene polyphenylene isocyanate	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
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
2,2'-methylenediphenyl diisocyanate	Inhalation	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 0.004 mg/l	during organogenesis
Chlorobenzene	Inhalation	Not toxic to female reproduction	Rat	NOAEL 2.07 mg/l	2 generation
Chlorobenzene	Ingestion	Not toxic to development	Rat	NOAEL 300	during

				mg/kg/day	organogenesis
Chlorobenzene	Inhalation	Not toxic to development	Rat	NOAEL 2.07 mg/l	2 generation
Chlorobenzene	Inhalation	Some positive male reproductive data exist, but the data are not sufficient for classification	Rat	NOAEL 2.07 mg/l	2 generation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Polymethylene polyphenylene isocyanate	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	
Diphenylmethane-2,4'-diisocyanate	Inhalation	respiratory irritation	May cause respiratory irritation	official classification	NOAEL Not available	
2,2'-methylenediphenyl diisocyanate	Inhalation	respiratory irritation	May cause respiratory irritation	official classification	NOAEL Not available	
Chlorobenzene	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Chlorobenzene	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Polymethylene polyphenylene isocyanate	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
Diphenylmethane-2,4'-diisocyanate	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0.004 mg/l	13 weeks
2,2'-methylenediphenyl diisocyanate	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0.004 mg/l	13 weeks
Chlorobenzene	Inhalation	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 0.69 mg/l	2 generation
Chlorobenzene	Inhalation	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 2.1 mg/l	2 generation
Chlorobenzene	Inhalation	blood	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 0.35 mg/l	24 weeks
Chlorobenzene	Ingestion	bone marrow	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 250 mg/kg/day	13 weeks
Chlorobenzene	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 188 mg/kg/day	192 days
Chlorobenzene	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 125 mg/kg/day	13 weeks
Chlorobenzene	Ingestion	immune system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 750 mg/kg/day	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 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
Polymethylene polyphenylene isocyanate	9016-87-9	Ricefish	Laboratory	96 hours	LC50	21 mg/l
Polymethylene polyphenylene isocyanate	9016-87-9	Water flea	Laboratory	48 hours	EC50	2.5 mg/l
Polymethylene polyphenylene isocyanate	9016-87-9	Water flea	Laboratory	21 days	NOEC	0.0053 mg/l
Polymethylene polyphenylene isocyanate	9016-87-9	Water flea	Experimental	48 hours	EC50	2.5 mg/l
Polymethylene polyphenylene isocyanate	9016-87-9	Ricefish	Experimental	96 hours	LC50	21 mg/l
Polymethylene polyphenylene isocyanate	9016-87-9	Water flea	Experimental	21 days	NOEC	0.0053 mg/l
Chlorobenzene	108-90-7	Green Algae	Experimental	96 hours	EC50	12.5 mg/l
Chlorobenzene	108-90-7	Water flea	Experimental	48 hours	EC50	0.59 mg/l
Chlorobenzene	108-90-7	Fish other	Experimental	84 hours	LC50	0.34 mg/l
Diphenylmethane-2,4'-diisocyanate	5873-54-1	Water flea	Estimated	24 hours	EC50	>500 mg/l
Chlorobenzene	108-90-7	Zebra Fish	Experimental	28 days	NOEC	8.5 mg/l
Chlorobenzene	108-90-7	Water flea	Experimental	21 days	NOEC	0.72 mg/l
2,2'-methylenediphenyl diisocyanate	2536-05-2		Data not available or insufficient for classification			
4,4'-methylenediphenyl diisocyanate	101-68-8		Data not available or insufficient for classification			

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Polymethylene	9016-87-9	Analogous	28 days	BOD	0 % weight	OECD 301C - MITI

polyphenylene isocyanate		Compound Biodegradation				test (I)
Polymethylene polyphenylene isocyanate	9016-87-9	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
4,4'-methylenediphenyl diisocyanate	101-68-8	Experimental Hydrolysis		Hydrolytic half-life	<2 hours (t 1/2)	Other methods
Chlorobenzene	108-90-7	Experimental Photolysis		Photolytic half-life (in air)	42 days (t 1/2)	Other methods
Diphenylmethane-2,4'-diisocyanate	5873-54-1	Estimated Biodegradation	28 days	BOD	0 % weight	OECD 301C - MITI test (I)
2,2'-methylenediphenyl diisocyanate	2536-05-2	Experimental Biodegradation	28 days	BOD	0 % weight	OECD 301C - MITI test (I)
2,2'-methylenediphenyl diisocyanate	2536-05-2	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)
Chlorobenzene	108-90-7	Experimental Biodegradation	20 days	BOD	55 % weight	OECD 301D - Closed bottle test

12.3 : Bioaccumulative potential

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Polymethylene polyphenylene isocyanate	9016-87-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Diphenylmethane-2,4'-diisocyanate	5873-54-1	Estimated BCF-Carp	28 days	Bioaccumulation factor	200	Other methods
2,2'-methylenediphenyl diisocyanate	2536-05-2	Experimental BCF-Carp	28 days	Bioaccumulation factor	200	Other methods
4,4'-methylenediphenyl diisocyanate	101-68-8	Experimental BCF-Carp	28 days	Bioaccumulation factor	200	Other methods
Chlorobenzene	108-90-7	Experimental BCF-Carp	56 days	Bioaccumulation factor	39.6	OECD 305E - Bioaccumulation flow-through fish test

12.4. Mobility in soil

Please contact manufacturer for more details

12.5. Results of the PBT and vPvB assessment

No information available at this time, contact manufacturer for more details

12.6. Other adverse effects
No information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods
See Section 11.1 Information on toxicological effects

As a disposal alternative, incinerate in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. Combustion products will include halogen acid (HCl/HF/HBr). Facility must be capable of handling halogenated materials. 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-2001-0945-6

ADR/RID: UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE,LIQUID,N.O.S.LIMITED QUANTITY, (POLYMETHYLENE POLYPHENYLENE ISOCYANATE), 9., III, (E), ADR Classification Code: M6.
IMDG-CODE: UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE,LIQUID, N.O.S., (POLYMETHYLENE POLYPHENYLENE ISOCYANATE), 9., III, IMDG-Code segregation code: NONE, LIMITED QUANTITY, EMS: FA,SF.
ICAO/IATA: UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S, (POLYMETHYLENE POLYPHENYLENE ISOCYANATE), 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
2,2'-methylenediphenyl diisocyanate	2536-05-2	Carc. 2	Regulation (EC) No. 1272/2008, Table 3.1
2,2'-methylenediphenyl diisocyanate	2536-05-2	Carc.Cat.3	Regulation (EC) No. 1272/2008, Table 3.2
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.

4,4'-methylenediphenyl diisocyanate	101-68-8	Carc. 2	1272/2008, Table 3.2 Regulation (EC) No.
4,4'-methylenediphenyl diisocyanate	101-68-8	Carc.Cat.3	1272/2008, Table 3.1 Regulation (EC) No.
4,4'-methylenediphenyl diisocyanate	101-68-8	Gr. 3: Not classifiable	1272/2008, Table 3.2 International Agency for Research on Cancer
Polymethylene polyphenylene isocyanate	9016-87-9	Carc. 2	3M classified according to Regulation (EC) No 1272/2008
Polymethylene polyphenylene isocyanate	9016-87-9	Carc.Cat.3	3M classified according to Directive 67/548/EEC
Polymethylene polyphenylene isocyanate	9016-87-9	Gr. 3: Not classifiable	International Agency for Research on Cancer

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

15.2. Chemical Safety Assessment
Not applicable

SECTION 16: Other information

List of relevant H statements

H226	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.
H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.

List of relevant R-phrases

R10	Flammable.
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.
R51/53	Toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

Revision information:
Revision Changes:
Section 8: Eye/face protection information information was modified.
Section 8: Skin protection - recommended gloves information information was modified.
Section 8: Respiratory protection - recommended respirators information information was modified.
Section 8: Skin protection - protective clothing information information was modified.
Section 3: Composition/ Information of ingredients table information was modified.
Section 12: Persistence and Degradability information information was modified.
Section 12:Bioccumulative potential information information was modified.
Label: CLP Precautionary - Prevention information was modified.
CLP: Ingredient table information was modified.
Telephone header information was modified.
Company Telephone information was modified.
Section 11: Acute Toxicity table information was modified.
Section 11: Health Effects - Inhalation information information was modified.
Section 5: Fire - Advice for fire fighters information information was modified.
Section 7: Conditions safe storage information was modified.
Section 8: Personal Protection - Skin/hand information information was modified.
Section 8: Personal Protection - Respiratory Information information was modified.
Section 4: First aid for inhalation information information was modified.
Section 4: First Aid - notes to physician (REACH/GHS) information was modified.
Label: CLP Percent Unknown information was added.
Section 8: Occupational exposure limit table information was added.
Section 12: Classification Warning information was added.
Section 11: Classification disclaimer information was added.
Section 2: Notes on labelling heading information was deleted.
Section 11: Classification disclaimer information was deleted.
Section 12: Classification Warning information was deleted.

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

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

Safety Data Sheet

Document group:	28-0954-9	**Version number:**	5.00
Revision date:	27/08/2014	**Supersedes date:**	18/06/2014

Transportation version number: 1.00 (02/11/2010)

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 Ceramic Lining FG 514, Grey (Part A)

Product Identification Numbers
GR-2001-0947-2

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:
Hazardous to the Aquatic Environment (Chronic), Category 3 - Aquatic Chronic 3; H412

For full text of H phrases, see Section 16.

Dangerous substances(67/548/EEC)/preparations(1999/45/EC) directive
Indication of danger
Dangerous for the environment; R52/53

For full text of R phrases, see Section 16.

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

HAZARD STATEMENTS:

H412	Harmful to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

Disposal:

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

8% of the mixture consists of components of unknown acute oral toxicity.

Contains 13% 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

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

Safety phrases

S61	Avoid release to the environment. Refer to special instructions/safety data sheets.

2.3. Other hazards

None known.

SECTION 3: Composition/information on ingredients

Ingredient	CAS Nbr	EU Inventory	% by Wt	Classification
Castor oil	8001-79-4	EINECS 232-293-8	40 - 50	
Zeolites	1318-02-1	EINECS 215-283-8	10 - 20	
Chlorite-group minerals	1318-59-8	EINECS 215-285-9	5 - 15	
Formaldehyde Polymer	Trade Secret		5 - 15	
Silicon Carbide	409-21-2	EINECS 206-991-8	5 - 10	
Titanium dioxide	13463-67-7	EINECS 236-675-5	1 - 5	
Diethylmethylbenzenediamine	68479-98-1	EINECS 270-877-4	0.1 - 1	Xn:R21-22-48/22; Xi:R36; N:R50/53 - Nota C (EU)

				Acute Tox. 4, H312; Acute Tox. 4, H302; Eye Irrit. 2, H319; STOT RE 2, H373; Aquatic Acute 1, H400,M=1; Aquatic Chronic 1, H410,M=1 - Nota C (CLP)
Quartz	14808-60-7	EINECS 238-878-4	< 1	Xn:R48/20 (Vendor) STOT RE 1, H372 (Self Classified)
Talc	14807-96-6	EINECS 238-877-9	< 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
Wash with soap and water. 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. 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. 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. Avoid release to the environment. 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 heat. Keep from freezing. 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
Aluminum oxides	1318-02-1	Health and Safety Comm. (UK)	TWA(as inhalable dust):10 mg/m³;TWA(as respirable dust):4 mg/m³	
Titanium dioxide	13463-67-7	Health and Safety Comm. (UK)	TWA(Inhalable):10 mg/m3;TWA(respirable):4 mg/m³	
Talc	14807-96-6	Health and Safety Comm. (UK)	TWA(as respirable dust):1 mg/m³	

Silicon Carbide	409-21-2	Health and Safety Comm. (UK)	TWA(Inhalable):10 mg/m3;TWA(respirable):4 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: Neoprene.
Nitrile rubber.

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:	Thixotropic liquid.
Appearance/Odour	Faint oily odour; Grey colour
Odour threshold	*No data available.*
pH	*No data available.*
Boiling point/boiling range	>=300 ºC
Melting point	*Not applicable.*
Flammability (solid, gas)	Not applicable.
Explosive properties	Not classified
Oxidising properties	Not classified

Flash point	127 ºC [*Test Method:*Closed Cup]
Autoignition temperature	>=365 ºC
Flammable Limits(LEL)	*No data available.*
Flammable Limits(UEL)	*No data available.*
Vapour pressure	1,100 Pa [@ 50 ºC]
Relative density	1.18 [*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	1.18 g/ml

9.2. Other information

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

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.
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.

Moisture.

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
Respiratory tract irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Skin contact
Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness.

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	Dermal		No data available; calculated ATE >5,000 mg/kg
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
Castor oil	Ingestion		LD50 estimated to be > 5,000
Formaldehyde Polymer	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
Formaldehyde Polymer	Dermal	Rabbit	LD50 > 5,000 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
Silicon Carbide	Dermal	Rat	LD50 > 2,000 mg/kg
Silicon Carbide	Ingestion	Rat	LD50 > 2,000 mg/kg
Titanium dioxide	Dermal	Rabbit	LD50 > 10,000 mg/kg
Titanium dioxide	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 6.82 mg/l
Titanium dioxide	Ingestion	Rat	LD50 > 10,000 mg/kg
Diethylmethylbenzenediamine	Dermal	Rat	LD50 > 2,000 mg/kg
Diethylmethylbenzenediamine	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.61 mg/l
Diethylmethylbenzenediamine	Ingestion	Rat	LD50 472 mg/kg
Talc	Dermal		LD50 Not available
Talc	Ingestion		LD50 Not available
Quartz	Dermal		LD50 estimated to be > 5,000 mg/kg
Quartz	Ingestion		LD50 estimated to be > 5,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Castor oil	Human	Minimal irritation
Zeolites	Rabbit	No significant irritation
Titanium dioxide	Rabbit	No significant irritation
Diethylmethylbenzenediamine	Rabbit	No significant irritation
Talc	Rabbit	No significant irritation
Quartz		No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Castor oil	Rabbit	Mild irritant
Zeolites	Rabbit	Mild irritant
Titanium dioxide	Rabbit	No significant irritation
Diethylmethylbenzenediamine	Rabbit	Severe irritant
Talc	Rabbit	No significant irritation

Skin Sensitisation

Name	Species	Value
Castor oil	Human	Some positive data exist, but the data are not sufficient for classification
Titanium dioxide	Human and animal	Not sensitizing
Diethylmethylbenzenediamine	Human	Some positive data exist, but the data are not sufficient for classification

Respiratory Sensitisation

Name	Species	Value
Talc	Human	Not sensitizing

Germ Cell Mutagenicity

Name	Route	Value
Castor oil	In Vitro	Not mutagenic
Castor oil	In vivo	Not mutagenic
Titanium dioxide	In Vitro	Not mutagenic
Titanium dioxide	In vivo	Not mutagenic
Diethylmethylbenzenediamine	In Vitro	Some positive data exist, but the data are not sufficient for classification
Diethylmethylbenzenediamine	In vivo	Some positive data exist, but the data are not sufficient for classification
Talc	In Vitro	Not mutagenic
Talc	In vivo	Not mutagenic
Quartz	In Vitro	Some positive data exist, but the data are not sufficient for classification
Quartz	In vivo	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Titanium dioxide	Ingestion	Multiple animal species	Not carcinogenic
Titanium dioxide	Inhalation	Rat	Carcinogenic.
Diethylmethylbenzenediamine	Ingestion	Rat	Some positive data exist, but the data are not sufficient for classification
Talc	Inhalation	Rat	Some positive data exist, but the data are not sufficient for classification
Quartz	Inhalation	Human and animal	Carcinogenic.

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
Castor oil	Ingestion	Not toxic to female reproduction	Rat	NOAEL 4,800 mg/kg/day	13 weeks
Castor oil	Ingestion	Not toxic to male reproduction	Rat	NOAEL 4,800 mg/kg/day	13 weeks
Diethylmethylbenzenediamine	Ingestion	Not toxic to female reproduction	Rat	NOAEL 3.5 mg/kg/day	24 months
Diethylmethylbenzenediamine	Ingestion	Not toxic to male reproduction	Rat	NOAEL 2.8 mg/kg/day	24 months
Talc	Ingestion	Not toxic to development	Rat	NOAEL 1,600 mg/kg	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
Castor oil	Ingestion	heart | hematopoietic system | liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 4,800 mg/kg/day	13 weeks
Castor oil	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 13,000 mg/kg/day	13 weeks
Silicon Carbide	Inhalation	pneumoconiosis	Some positive data exist, but the data are not sufficient for classification		HHA	
Titanium dioxide	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 0.010 mg/l	2 years
Titanium dioxide	Inhalation	pulmonary fibrosis	All data are negative	Human	NOAEL Not available	occupational exposure
Diethylmethylbenzenediamine	Ingestion	liver	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0.4 mg/kg/day	24 months
Diethylmethylbenzenediamine	Ingestion	endocrine system	May cause damage to organs though prolonged or repeated exposure	Rat	NOAEL 1.4 mg/kg/day	24 months
Diethylmethylbenzenediamine	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 2.8 mg/kg/day	24 months
Diethylmethylbenzenediamine	Ingestion	eyes	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1.4 mg/kg/day	24 months
Diethylmethylbenzenediamine	Ingestion	heart | skin | bone, teeth, nails, and/or hair | hematopoietic system | immune system | muscles | nervous system | respiratory system	All data are negative	Rat	NOAEL 3.5 mg/kg/day	24 months
Talc	Inhalation	pneumoconiosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure
Talc	Inhalation	pulmonary fibrosis | respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 18 mg/m3	113 weeks
Quartz	Inhalation	silicosis	Causes damage to organs through prolonged or repeated exposure	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
Chlorite-group minerals	1318-59-8		Data not available or insufficient for classification			
Formaldehyde Polymer	Trade Secret		Data not available or insufficient for classification			
Castor oil	8001-79-4	Zebra Fish	Experimental	96 hours	LC50	>10,000 mg/l
Diethylmethyl benzenediamine	68479-98-1	Golden Orfe	Experimental	48 hours	LC50	194 mg/l
Diethylmethyl benzenediamine	68479-98-1	Water flea	Experimental	48 hours	EC50	0.5 mg/l
Quartz	14808-60-7		Data not available or insufficient for classification			
Silicon Carbide	409-21-2		Data not available or insufficient for classification			
Talc	14807-96-6		Data not available or insufficient for classification			
Titanium dioxide	13463-67-7	Water flea	Experimental	30 days	NOEC	3 mg/l
Titanium dioxide	13463-67-7	Fish	Experimental	30 days	NOEC	>=1,000 mg/l
Titanium dioxide	13463-67-7	Sheepshead Minnow	Experimental	96 hours	LC50	>240 mg/l
Titanium dioxide	13463-67-7	Crustacea other	Experimental	96 hours	EC50	>300 mg/l
Titanium dioxide	13463-67-7	Water flea	Experimental	48 hours	EC50	>100 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
Chlorite-group minerals	1318-59-8	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Formaldehyde Polymer	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Castor oil	8001-79-4	Experimental Biodegradation	28 days	BOD	64 % weight	OECD 301D - Closed bottle test
Diethylmethyl benzenediamine	68479-98-1	Experimental Biodegradation	28 days	BOD	<1 % weight	OECD 301D - Closed bottle test
Quartz	14808-60-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Silicon Carbide	409-21-2	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Talc	14807-96-6	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Titanium dioxide	13463-67-7	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

12.3 : Bioaccumulative potential

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Chlorite-group minerals	1318-59-8	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Formaldehyde Polymer	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Castor oil	8001-79-4	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

Diethylmethyl benzenediamine	68479-98-1	Estimated Bioconcentration		Bioaccumulation factor	9.0	Estimated: Bioconcentration factor
Quartz	14808-60-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Silicon Carbide	409-21-2	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Talc	14807-96-6	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Titanium dioxide	13463-67-7	Experimental BCF - Other	42 days	Bioaccumulation factor	9.6	Other methods
Zeolites	1318-02-1	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

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 completely cured (or polymerised) material in a permitted industrial waste facility. As a disposal alternative, incinerate uncured product in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. If no other disposal options are available, waste product that has been completely cured or polymerised may be placed in a landfill properly designed for industrial waste. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

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

EU waste code (product as sold)
080299 Wastes not otherwise specified

SECTION 14: Transportation information

GR-2001-0947-2

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
Quartz	14808-60-7	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer
Titanium dioxide	13463-67-7	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 the Korean Toxic Chemical Control Law. Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Australia National Industrial Chemical Notification and Assessment Scheme (NICNAS). Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Japan Chemical Substance Control Law. Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Philippines RA 6969 requirements. Certain restrictions may apply. Contact the selling division for additional information. The components of this product are in compliance with the new substance notification requirements of CEPA. The components of this product are in compliance with the chemical notification requirements of TSCA.

15.2. Chemical Safety Assessment
Not applicable

SECTION 16: Other information

List of relevant H statements

H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H319	Causes serious eye irritation.
H372	Causes damage to organs through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

List of relevant R-phrases

R21	Harmful in contact with skin.
R22	Harmful if swallowed.
R36	Irritating to eyes.
R48/20	Harmful: danger of serious damage to health by prolonged exposure through inhalation.

R48/22	Harmful: danger of serious damage to health by prolonged exposure if swallowed.
R50/53	Very toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.
R52/53	Harmful to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

Revision information:
Revision Changes:
Section 15: Carcinogenicity information 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: Serious Eye Damage/Irritation Table information was modified.
Section 11: Skin Corrosion/Irritation Table 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