



Safety Data Sheet

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Transportation version number:	7.00 (02/11/2013)		

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 Epoxy Metal Repair EG 503 (Kit)

Product Identification Numbers

GR-2001-2165-9 GR-2001-2170-9 GR-2001-2174-1

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.

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:

28-0485-4, 28-0522-4

TRANSPORTATION INFORMATION

GR-2001-2165-9, GR-2001-2170-9, GR-2001-2174-1

Component 1

ADR/RID: UN3259, AMINES, SOLID, CORROSIVE, N.O.S., LIMITED QUANTITY, (DIETHYLENETRIAMINE), (TRIETHYLENETETRAMINE), 8., III, (E), ADR Classification Code: C8.

IMDG-CODE: UN3259, AMINES, SOLID, CORROSIVE, N.O.S., (DIETHYLENETRIAMINE), (TRIETHYLENETETRAMINE), 8., III, IMDG-Code segregation code: 18- ALKALIS, LIMITED QUANTITY, EMS: FA,SB.

3M Scotchkote Epoxy Metal Repair EG 503 (Kit)

ICAO/IATA: UN3259, AMINES, SOLID, CORROSIVE, N.O.S., (DIETHYLENTRIAMINE), (TRIETHYLENETETRAMINE), 8, III.

Component 2

ADR/RID: NOT RESTRICTED FOR ROAD (ADR/RID), (--).

IMDG-CODE: not restricted according to IMDG-Code, IMDG-Code segregation code: NONE.

ICAO/IATA: NOT RESTRICTED FOR AIR SHIPMENT.

KIT LABEL

2.2. Label elements

CLP REGULATION (EC) No 1272/2008

SIGNAL WORD

DANGER!

Symbols:

GHS05 (Corrosion) | GHS07 (Exclamation mark) | GHS08 (Health Hazard) | GHS09 (Environment) |

Pictograms



HAZARD STATEMENTS:

H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H361f	Suspected of damaging fertility.
H341	Suspected of causing genetic defects.
H373	May cause damage to organs through prolonged or repeated exposure: blood or blood-forming organs cardiovascular system liver nervous system kidney/urinary tract respiratory system
H411	Toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

Prevention:

P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P280D	Wear protective gloves, protective clothing, and eye/face protection.
P273	Avoid release to the environment.

Response:

P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTRE or doctor/physician.

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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.

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

Symbol(s)



Corrosive



Dangerous
for the
environment

Contains:

Consult the component labels for disclosable ingredients.

Risk phrases

R20/21/22 Harmful by inhalation, in contact with skin and if swallowed.
R34 Causes burns.
R43 May cause sensitisation by skin contact.
R68 Possible risks of irreversible effects.
R51/53 Toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

Safety phrases

S23A Do not breathe vapour.
S36/37/39B Wear suitable protective clothing, gloves, and eye and face protection.
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S28C After contact with skin, wash immediately with plenty of water for 15 minutes.
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 epoxy resins. See information supplied by manufacturer.

Revision information:

Revision Changes:

Section 1: Product identification numbers heading information was modified.

Copyright information was modified.

Label: CLP Target Organ Hazard Statement information was modified.

Label: CLP Precautionary - Response information was modified.



Safety Data Sheet

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Revision date:	10/04/2014	Supersedes date:	04/03/2014
Transportation version number:	2.01 (27/08/2013)		

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 Epoxy Metal Repair EG 503 (Part A)

Product Identification Numbers

GR-2001-1262-5 GR-2001-1266-6 GR-2001-1272-4 GR-2001-4005-5

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:

Serious Eye Damage/Eye Irritation, Category 2 - Eye Irrit. 2; H319

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

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

3M Scotchkote Epoxy Metal Repair EG 503 (Part A)

Irritant; Xi; R36/38
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
Phenol-formaldehyde polymer, glycidyl ether	28064-14-4	10 - 20
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	25068-38-6	10 - 20

HAZARD STATEMENTS:

H319	Causes serious eye irritation.
H315	Causes skin irritation.
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:

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.
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70% of the mixture consists of components of unknown acute oral toxicity.

Contains 66% of components with unknown hazards to the aquatic environment.

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

3M Scotchkote Epoxy Metal Repair EG 503 (Part A)

Symbol(s)



Irritant



Dangerous
for the
environment

Contains:

4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane; Phenol-formaldehyde polymer, glycidyl ether

Risk phrases

R36/38 Irritating to eyes and skin.
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.

Special provisions concerning the labelling of certain substances

Contains epoxy resins. See information supplied by manufacturer.

2.3. Other hazards

None known.

SECTION 3: Composition/information on ingredients

Ingredient	CAS Nbr	EU Inventory	% by Wt	Classification
Non-Hazardous Ingredients	Mixture		50 - 90	
Phenol-formaldehyde polymer, glycidyl ether	28064-14-4		10 - 20	N:R51/53 (Vendor) R43 (Self Classified) Aquatic Chronic 2, H411 (Vendor) Skin Sens. 1, H317 (Self Classified)
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	25068-38-6	NLP 500-033-5	10 - 20	Xi:R36-38; N:R51/53; R43 (EU) Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; Aquatic Chronic 2, H411 (CLP)
Titanium	7440-32-6	EINECS 231-142-3	1 - 5	
Manganese	7439-96-5	EINECS 231-105-1	1 - 5	

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

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

5.3. Advice for fire-fighters

No unusual fire or explosion hazards are anticipated.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

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

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material does not remove a toxic, corrosivity or flammability hazard. Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue. 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. Store work clothes separately from other clothing, food and tobacco products. 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.)

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.

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
Manganese	7439-96-5	Health and Safety Comm. (UK)	TWA(as Mn):0.5 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:

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: Butyl 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 – Butyl 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:

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	Solid.
Specific Physical Form:	Paste
Appearance/Odour	Grey/black colour; Faint epoxy odour.
Odour threshold	<i>No data available.</i>
pH	<i>No data available.</i>
Boiling point/boiling range	240 °C
Melting point	<i>Not applicable.</i>
Flammability (solid, gas)	Not classified
Explosive properties	Not classified
Oxidising properties	Not classified
Flash point	≥240 °C [<i>Test Method: Closed Cup</i>]
Autoignition temperature	≥300 °C
Flammable Limits(LEL)	<i>No data available.</i>
Flammable Limits(UEL)	<i>No data available.</i>
Vapour pressure	<i>No data available.</i>
Relative density	2.700 [<i>Ref Std: WATER=1</i>]
Water solubility	Negligible
Solubility- non-water	<i>No data available.</i>
Partition coefficient: n-octanol/water	<i>No data available.</i>
Evaporation rate	<i>Not applicable.</i>
Vapour density	<i>No data available.</i>
Decomposition temperature	<i>No data available.</i>
Viscosity	<i>No data available.</i>
Density	2.7 g/ml

9.2. Other information

Volatile organic compounds (VOC) 0 g/l [*Test Method: Estimated*] [*Details: EU Definition (Part A)*]

Percent volatile and B mix)]
0 % 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

Avoid curing large quantities of material to prevent a premature reaction (exotherm) with production of intense heat and smoke.

Heat is generated during cure. Do not cure a mass larger than 50 grams in a confined space to prevent a premature exothermic reaction with production of intense heat and smoke.

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.

10.6 Hazardous decomposition products

<u>Substance</u>	<u>Condition</u>
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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

Respiratory tract irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. Dust from cutting, grinding, sanding or machining may cause irritation of the respiratory system:

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

Skin contact

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

Eye contact

Moderate eye irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision. Dust created by cutting, grinding, sanding, or machining may cause eye irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Ingestion

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

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 ATE >5,000 mg/kg
Phenol-formaldehyde polymer, glycidyl ether	Dermal	Rabbit	LD50 > 6,000 mg/kg
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Dermal	Rat	LD50 > 1,600 mg/kg
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Ingestion	Rat	LD50 > 1,000 mg/kg
Phenol-formaldehyde polymer, glycidyl ether	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 1.7 mg/l
Phenol-formaldehyde polymer, glycidyl ether	Ingestion	Rat	LD50 > 4,000 mg/kg
Manganese	Dermal		LD50 estimated to be > 5,000 mg/kg
Manganese	Ingestion	Rat	LD50 > 9,000 mg/kg
Titanium	Dermal		LD50 estimated to be > 5,000 mg/kg
Titanium	Ingestion		LD50 estimated to be > 5,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Rabbit	Mild irritant
Phenol-formaldehyde polymer, glycidyl ether	Rabbit	Minimal irritation

Serious Eye Damage/Irritation

Name	Species	Value
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Rabbit	Moderate irritant
Phenol-formaldehyde polymer, glycidyl ether	Rabbit	Mild irritant

Skin Sensitisation

Name	Species	Value
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Human and animal	Sensitising
Phenol-formaldehyde polymer, glycidyl ether	Human and animal	Sensitising

Respiratory Sensitisation

Name	Species	Value
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Human	Some positive data exist, but the data are not sufficient for classification

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Name	Route	Value
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	In vivo	Not mutagenic
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	In Vitro	Some positive data exist, but the data are not sufficient for classification
Phenol-formaldehyde polymer, glycidyl ether	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification

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

Name	Route	Value	Species	Test result	Exposure Duration
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Ingestion	Not toxic to female reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Ingestion	Not toxic to male reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Dermal	Not toxic to development	Rabbit	NOAEL 300 mg/kg/day	during organogenesis
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Ingestion	Not toxic to development	Rat	NOAEL 750 mg/kg/day	2 generation

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
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Dermal	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1,000 mg/kg/day	2 years
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Dermal	nervous system	All data are negative	Rat	NOAEL 1,000 mg/kg/day	13 weeks
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Ingestion	auditory system heart endocrine system hematopoietic system liver eyes kidney and/or bladder	All data are negative	Rat	NOAEL 1,000 mg/kg/day	28 days

Aspiration Hazard

Name	Value

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Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. Additional information leading to material classification in Section 2 is available upon request. In addition, environmental fate and effects data on ingredients may not be reflected in this section because an ingredient is present below the threshold for labelling, an ingredient is not expected to be available for exposure, or the data is considered not relevant to the material as a whole.

12.1. Toxicity

No product test data available.

Material	CAS Nbr	Organism	Type	Exposure	Test endpoint	Test result
4,4'-Isopropylidene diphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	25068-38-6	Ricefish	Experimental	96 hours	LC50	1.41 mg/l
Phenol-formaldehyde polymer, glycidyl ether	28064-14-4	Golden Orfe	Laboratory	96 hours	LC50	5.7 mg/l
Phenol-formaldehyde polymer, glycidyl ether	28064-14-4	Water flea	Laboratory	48 hours	EC50	3.5 mg/l
4,4'-Isopropylidene diphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	25068-38-6	Water flea	Experimental	21 days	NOEC	0.3 mg/l
Manganese	7439-96-5		Data not available or insufficient for classification			
Titanium	7440-32-6		Data not available or insufficient for classification			

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Phenol-formaldehyde	28064-14-4	Laboratory Biodegradation	28 days	CO2 evolution	10 % weight	OECD 301B - Modified sturm or CO2

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polymer, glycidyl ether						
Titanium	7440-32-6	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
4,4'-Isopropylidene diphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	25068-38-6	Laboratory Hydrolysis		Hydrolytic half-life	<2 days (t 1/2)	Other methods
4,4'-Isopropylidene diphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	25068-38-6	Laboratory Biodegradation	28 days	BOD	0 % weight	OECD 301C - MITI test (I)
Manganese	7439-96-5	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

12.3 : Bioaccumulative potential

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Phenol-formaldehyde polymer, glycidyl ether	28064-14-4	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Titanium	7440-32-6	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
4,4'-Isopropylidene diphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	25068-38-6	Laboratory BCF - Other	28 days	Bioaccumulation factor	<42	Other methods
Manganese	7439-96-5	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

3M Scotchkote Epoxy Metal Repair EG 503 (Part A)

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. 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-2001-1262-5, GR-2001-1266-6, GR-2001-1272-4, GR-2001-4005-5

Not hazardous for transportation

SECTION 15: Regulatory information

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

Global inventory status

Contact 3M for more 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 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.

H411 Toxic to aquatic life with long lasting effects.

List of relevant R-phrases

R36 Irritating to eyes.
R36/38 Irritating to eyes and skin.
R38 Irritating to skin.
R43 May cause sensitisation by skin contact.
R51/53 Toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

Revision information:

Revision Changes:

Section 16: Regulations - Inventories - EU ONLY information was modified.

Section 8: 8.1.1 Biological limit values table heading information was added.

Section 8: BLV information was added.

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



Safety Data Sheet

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Transportation version number:	5.01 (11/12/2013)		

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 Epoxy Metal Repair EG 503 (Part B)

Product Identification Numbers

GR-2001-1261-7 GR-2001-1265-8 GR-2001-4004-8

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:

Serious Eye Damage/Eye Irritation, Category 1 - Eye Dam. 1; H318

Skin Corrosion/Irritation, Category 1B - Skin Corr. 1B; H314

Skin Sensitization, Category 1 - Skin Sens. 1; H317

Reproductive Toxicity, Category 2 - Repr. 2; H361

Germ Cell Mutagenicity, Category 2 - Muta. 2; H341

Specific Target Organ Toxicity-Repeated Exposure, Category 2 - STOT RE 2; H373

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

Mutagenic; Muta. Cat. 3; R68
Harmful; Xn; R20/21/22
Corrosive; C; R34
Sensitizing; R43

For full text of R phrases, see Section 16.

2.2. Label elements

CLP REGULATION (EC) No 1272/2008

SIGNAL WORD

DANGER!

Symbols:

GHS05 (Corrosion) | GHS07 (Exclamation mark) | GHS08 (Health Hazard) |GHS09 (Environment) |

Pictograms



Ingredient	CAS Nbr	% by Wt
Diethylenetriamine	111-40-0	5 - 15
4,4'-Isopropylidenediphenol	80-05-7	1 - 5
Triethylenetetramine	112-24-3	1 - 5
Phenol	108-95-2	1 - 5

HAZARD STATEMENTS:

H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H361f	Suspected of damaging fertility.
H341	Suspected of causing genetic defects.
H373	May cause damage to organs through prolonged or repeated exposure: blood or blood-forming organs cardiovascular system liver nervous system kidney/urinary tract respiratory system
H411	Toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

Prevention:

P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P280D	Wear protective gloves, protective clothing, and eye/face protection.
P273	Avoid release to the environment.

Response:

P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

3M Scotchkote Epoxy Metal Repair EG 503 (Part B)

P310 Immediately call a POISON CENTRE or doctor/physician.
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.

37% of the mixture consists of components of unknown acute oral toxicity.
37% of the mixture consists of components of unknown acute dermal toxicity.
28% of the mixture consists of components of unknown acute inhalation toxicity.
Contains 27% of components with unknown hazards to the aquatic environment.

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

Symbol(s)



Corrosive

Contains:

4,4'-Isopropylidenediphenol; Diethylenetriamine; Phenol; Triethylenetetramine

Risk phrases

R20/21/22 Harmful by inhalation, in contact with skin and if swallowed.
R34 Causes burns.
R43 May cause sensitisation by skin contact.
R68 Possible risks of irreversible effects.

Safety phrases

S23A Do not breathe vapour.
S36/37/39B Wear suitable protective clothing, gloves, and eye and face protection.
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S28C After contact with skin, wash immediately with plenty of water for 15 minutes.
S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

2.3. Other hazards

Persons previously sensitised to amines may develop a cross-sensitisation reaction to certain other amines. May cause chemical gastrointestinal burns.

SECTION 3: Composition/information on ingredients

Ingredient	CAS Nbr	EU Inventory	% by Wt	Classification
Non Hazardous Ingredients	Mixture		45 - 55	
Formaldehyde, oligomeric reaction products with phenol and triethylenetetramine	32610-77-8	NLP 500-083-8	10 - 20	
Glass, oxide, chemicals	65997-17-3	EINECS 266-046-0	10 - 20	
Diethylenetriamine	111-40-0	EINECS 203-865-4	5 - 15	C:R34; Xn:R21-22; R43 (EU) R52/53 (Self Classified) Acute Tox. 4, H312; Acute Tox.

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				4, H302; Skin Corr. 1B, H314; Skin Sens. 1, H317 (CLP)
Titanium dioxide	13463-67-7	EINECS 236-675-5	5 - 15	
Dimethyl siloxane, reaction product with silica	67762-90-7		1 - 5	
4,4'-Isopropylidenediphenol	80-05-7	EINECS 201-245-8	1 - 5	Repr.Cat.3:R62; Xi:R37-41; R43; R52 (EU) Eye Dam. 1, H318; Skin Sens. 1, H317; Repr. 2, H361f; STOT SE 3, H335 (CLP) Aquatic Chronic 2, H411 (Self Classified)
Triethylenetetramine	112-24-3	EINECS 203-950-6	1 - 5	C:R34; Xn:R21; R43; R52/53 (EU) Acute Tox. 3, H311; Skin Corr. 1B, H314; Skin Sens. 1A, H317; Aquatic Chronic 3, H412 (CLP)
Phenol	108-95-2	EINECS 203-632-7	1 - 5	Muta.Cat.3:R68; T:R23-24-25; C:R34; Xn:R48/20; Xn:R48/21; Xn:R48/22 (EU) R52 (Self Classified) Acute Tox. 3, H331; Acute Tox. 3, H311; Acute Tox. 3, H301; Skin Corr. 1B, H314; Muta. 2, H341; STOT RE 1, H372 (CLP) Aquatic Chronic 1, H410,M=1 (Self Classified)
Quartz	14808-60-7	EINECS 238-878-4	< 1	Xn:R48/20 (Vendor) STOT RE 1, H372 (Self Classified)

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 flush with large amounts of water for at least 15 minutes. Remove contaminated clothing. Get immediate medical attention. Wash clothing before reuse.

Eye contact

Immediately flush with large amounts of water for at least 15 minutes. Remove contact lenses if easy to do. Continue rinsing. Immediately get medical attention.

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If swallowed

Rinse mouth. Do not induce vomiting. Get immediate 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

<u>Substance</u>	<u>Condition</u>
Carbon monoxide.	During combustion.
Carbon dioxide.	During combustion.
Oxides of nitrogen.	During combustion.

5.3. Advice for fire-fighters

No unusual fire or explosion hazards 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. Clean up residue. Seal the container. Dispose of collected material as soon as possible.

6.4. Reference to other sections

Refer to Section 8 and Section 13 for more information

SECTION 7: Handling and storage

7.1. Precautions for safe handling

For industrial or professional use only. Do not use in a confined area with minimal air exchange. Do not handle until all safety precautions have been read and understood. 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.) Use personal protective equipment (eg. gloves, respirators...) as required.

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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.

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
Phenol	108-95-2	Health and Safety Comm. (UK)	TWA:7.8 mg/m ³ (2 ppm);STEL:16 mg/m ³ (4 ppm)	Skin Notation
Diethylenetriamine	111-40-0	Health and Safety Comm. (UK)	TWA:4.3 mg/m ³ (1 ppm)	Skin Notation
Titanium dioxide	13463-67-7	Health and Safety Comm. (UK)	TWA(Inhalable):10 mg/m ³ ;TWA(respirable):4 mg/m ³	
Quartz	14808-60-7	Health and Safety Comm. (UK)	TWA(respirable):0.1 mg/m ³	
Glass, oxide, chemicals	65997-17-3	Health and Safety Comm. (UK)	TWA(as fiber):5 mg/m ³ (1 fibers/ml)	
Glass, oxide, chemicals	65997-17-3	Manufacturer determined	TWA(as dust):10 mg/m ³	
4,4'-Isopropylidenediphenol	80-05-7	Health and Safety Comm. (UK)	TWA(as inhalable dust):10 mg/m ³	

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:

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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: Butyl 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 – Butyl 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:

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	Solid.
Specific Physical Form:	Paste
Appearance/Odour	Ammonia odour; Grey colour
Odour threshold	<i>No data available.</i>
pH	≥ 8 [<i>Details: Alkaline</i>]
Boiling point/boiling range	≥ 250 °C
Melting point	<i>Not applicable.</i>
Flammability (solid, gas)	Not classified
Explosive properties	Not classified
Oxidising properties	Not classified
Flash point	≥ 150 °C [<i>Test Method: Closed Cup</i>]
Autoignition temperature	≥ 450 °C
Flammable Limits(LEL)	<i>No data available.</i>
Flammable Limits(UEL)	<i>No data available.</i>
Vapour pressure	≤ 13.3 Pa
Relative density	1.73 [<i>Ref Std: WATER=1</i>]
Water solubility	Negligible
Solubility- non-water	<i>No data available.</i>
Partition coefficient: n-octanol/water	<i>No data available.</i>
Evaporation rate	<i>Not applicable.</i>
Vapour density	<i>No data available.</i>
Decomposition temperature	<i>No data available.</i>
Viscosity	<i>No data available.</i>
Density	1.73 g/ml

9.2. Other information

3M Scotchkote Epoxy Metal Repair EG 503 (Part B)

Volatile organic compounds (VOC)	0 g/l [<i>Test Method</i> :Estimated] [<i>Details</i> :EU Definition (Part A and B mix)]
Percent volatile	0 % 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 is generated during cure. Do not cure a mass larger than 50 grams in a confined space to prevent a premature exothermic reaction with production of intense heat and smoke.

10.5 Incompatible materials

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

<u>Substance</u>	<u>Condition</u>
------------------	------------------

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

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.

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Skin contact

May be harmful in contact with skin.

Corrosive (skin burns): Signs/symptoms may include localised redness, swelling, itching, intense pain, blistering, ulceration, and tissue destruction. Allergic skin reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching. Photosensitisation: Signs/symptoms may include a sunburn-like reaction such as blistering, redness, swelling, and itching from minor exposure to sunlight. May cause target organ effects after skin contact.

Eye contact

Corrosive (eye burns): Signs/symptoms may include cloudy appearance of the cornea, chemical burns, severe pain, tearing, ulcerations, significantly impaired vision or complete loss of vision.

Ingestion

Harmful if swallowed.

Gastrointestinal corrosion: Signs/symptoms may include severe mouth, throat and abdominal pain, nausea, vomiting, and diarrhea; blood in the faeces and/or vomitus may also be seen. May cause target organ effects after ingestion.

Target Organ Effects:

Single exposure may cause:

Cardiac effects: Signs/symptoms may include irregular heartbeat (arrhythmia), changes in heart rate, damage to heart muscle, heart attack, and may be fatal. Hematopoietic effects: Signs/symptoms may include generalised weakness, fatigue and alterations in numbers of circulating blood cells. Neurological effects: Signs/symptoms may include personality changes, lack of coordination, sensory loss, tingling or numbness of the extremities, weakness, tremors, and changes in blood pressure and heart rate. 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. Kidney/Bladder effects: Signs/symptoms may include changes in urine production, abdominal or lower back pain, increased protein in urine, increased blood urea nitrogen (BUN), blood in urine, and painful urination.

Prolonged or repeated exposure may cause:

Cardiac effects: Signs/symptoms may include irregular heartbeat (arrhythmia), changes in heart rate, damage to heart muscle, heart attack, and may be fatal. Hematopoietic effects: Signs/symptoms may include generalised weakness, fatigue and alterations in numbers of circulating blood cells. Liver effects: Signs/symptoms may include loss of appetite, weight loss, fatigue, weakness, abdominal tenderness and jaundice. Neurological effects: Signs/symptoms may include personality changes, lack of coordination, sensory loss, tingling or numbness of the extremities, weakness, tremors, and changes in blood pressure and heart rate. 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. Kidney/Bladder effects: Signs/symptoms may include changes in urine production, abdominal or lower back pain, increased protein in urine, increased blood urea nitrogen (BUN), blood in urine, and painful urination.

Reproductive/Developmental Toxicity:

Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

Carcinogenicity:

Contains a chemical or chemicals which can cause cancer.

Additional information:

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	Dermal		No data available; calculated ATE2,000 - 5,000 mg/kg
Overall product	Inhalation-		No data available; calculated ATE >50 mg/l

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	Vapor(4 hr)		
Overall product	Ingestion		No data available; calculated ATE300 - 2,000 mg/kg
Glass, oxide, chemicals	Dermal		LD50 estimated to be > 5,000 mg/kg
Glass, oxide, chemicals	Ingestion		LD50 estimated to be 2,000 - 5,000 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
Diethylenetriamine	Dermal	Rabbit	LD50 1,045 mg/kg
Diethylenetriamine	Ingestion	Rat	LD50 819 mg/kg
Triethylenetetramine	Dermal	Rabbit	LD50 550 mg/kg
Triethylenetetramine	Ingestion	Rat	LD50 2,500 mg/kg
Dimethyl siloxane, reaction product with silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
Dimethyl siloxane, reaction product with silica	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Dimethyl siloxane, reaction product with silica	Ingestion	Rat	LD50 > 5,110 mg/kg
4,4'-Isopropylidenediphenol	Dermal	Rabbit	LD50 > 2,000 mg/kg
4,4'-Isopropylidenediphenol	Ingestion	Rat	LD50 3,200 mg/kg
Phenol	Inhalation-Vapor		LC50 estimated to be 2 - 10 mg/l
Phenol	Dermal	Rat	LD50 670 mg/kg
Phenol	Ingestion	Rat	LD50 340 mg/kg
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
Glass, oxide, chemicals		No significant irritation
Titanium dioxide	Rabbit	No significant irritation
Diethylenetriamine	Rabbit	Corrosive
Triethylenetetramine	Rabbit	Corrosive
Dimethyl siloxane, reaction product with silica	Rabbit	No significant irritation
4,4'-Isopropylidenediphenol	Rabbit	No significant irritation
Phenol	Rat	Corrosive
Quartz		No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Glass, oxide, chemicals		No significant irritation
Titanium dioxide	Rabbit	No significant irritation
Diethylenetriamine	Rabbit	Corrosive
Triethylenetetramine	Rabbit	Corrosive
Dimethyl siloxane, reaction product with silica	Rabbit	No significant irritation
4,4'-Isopropylidenediphenol	Rabbit	Corrosive
Phenol	Rabbit	Corrosive

Skin Sensitisation

Name	Species	Value
Titanium dioxide	Human and animal	Not sensitizing
Diethylenetriamine	Guinea pig	Sensitising
Triethylenetetramine	Guinea pig	Sensitising
Dimethyl siloxane, reaction product with silica	Human and animal	Not sensitizing
4,4'-Isopropylidenediphenol	official classification	Sensitising
Phenol	Guinea pig	Not sensitizing

3M Scotchkote Epoxy Metal Repair EG 503 (Part B)**Photosensitisation**

Name	Species	Value
4,4'-Isopropylidenediphenol	Human and animal	Sensitising

Respiratory Sensitisation

Name	Species	Value
Diethylenetriamine	Human	Sensitising

Germ Cell Mutagenicity

Name	Route	Value
Glass, oxide, chemicals	In Vitro	Some positive data exist, but the data are not sufficient for classification
Titanium dioxide	In Vitro	Not mutagenic
Titanium dioxide	In vivo	Not mutagenic
Diethylenetriamine	In Vitro	Not mutagenic
Dimethyl siloxane, reaction product with silica	In Vitro	Not mutagenic
4,4'-Isopropylidenediphenol	In vivo	Not mutagenic
4,4'-Isopropylidenediphenol	In Vitro	Some positive data exist, but the data are not sufficient for classification
Phenol	In Vitro	Some positive data exist, but the data are not sufficient for classification
Phenol	In vivo	Some positive data exist, but the data are not sufficient for classification
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
Glass, oxide, chemicals	Inhalation	Multiple animal species	Some positive data exist, but the data are not sufficient for classification
Titanium dioxide	Ingestion	Multiple animal species	Not carcinogenic
Titanium dioxide	Inhalation	Rat	Carcinogenic.
Diethylenetriamine	Dermal	Multiple animal species	Not carcinogenic
Dimethyl siloxane, reaction product with silica	Not specified.	Mouse	Some positive data exist, but the data are not sufficient for classification
4,4'-Isopropylidenediphenol	Ingestion	Multiple animal species	Some positive data exist, but the data are not sufficient for classification
Phenol	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
Phenol	Ingestion	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
Diethylenetriamine	Ingestion	Not toxic to male reproduction	Rat	NOAEL 300 mg/kg/day	28 days
Diethylenetriamine	Ingestion	Not toxic to development	Rat	NOAEL 300	prematuring &

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				mg/kg/day	during gestation
Diethylenetriamine	Ingestion	Some positive female reproductive data exist, but the data are not sufficient for classification	Rat	NOAEL 30 mg/kg/day	prematuring & during gestation
Dimethyl siloxane, reaction product with silica	Ingestion	Not toxic to female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Dimethyl siloxane, reaction product with silica	Ingestion	Not toxic to male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Dimethyl siloxane, reaction product with silica	Ingestion	Not toxic to development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
4,4'-Isopropylidenediphenol	Inhalation	Not toxic to female reproduction	Rat	NOAEL 0.15 mg/l	13 weeks
4,4'-Isopropylidenediphenol	Inhalation	Not toxic to male reproduction	Rat	NOAEL 0.15 mg/l	13 weeks
4,4'-Isopropylidenediphenol	Ingestion	Some positive female reproductive data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL 50 mg/kg/day	
4,4'-Isopropylidenediphenol	Ingestion	Some positive male reproductive data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL 50 mg/kg/day	
4,4'-Isopropylidenediphenol	Ingestion	Toxic to development	Multiple animal species	NOAEL 50 mg/kg/day	
Phenol	Ingestion	Some positive female reproductive data exist, but the data are not sufficient for classification	Rat	NOAEL 321 mg/kg/day	2 generation
Phenol	Ingestion	Some positive male reproductive data exist, but the data are not sufficient for classification	Rat	NOAEL 321 mg/kg/day	2 generation
Phenol	Ingestion	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 120 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
Diethylenetriamine	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
4,4'-Isopropylidenediphenol	Inhalation	respiratory irritation	May cause respiratory irritation	Multiple animal species	LOAEL 0.152 mg/l	15 minutes
Phenol	Dermal	hematopoietic system	Causes damage to organs	Rat	LOAEL 108 mg/kg	not available
Phenol	Dermal	heart nervous system kidney and/or bladder	Causes damage to organs	Rat	LOAEL 107 mg/kg	24 hours
Phenol	Dermal	liver	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	not available
Phenol	Inhalation	respiratory irritation	May cause respiratory irritation	Multiple animal species	NOAEL Not available	not available
Phenol	Ingestion	kidney and/or bladder	Causes damage to organs	Rat	NOAEL 120 mg/kg/day	not applicable
Phenol	Ingestion	respiratory system	Causes damage to organs	Human	NOAEL not available	poisoning and/or abuse
Phenol	Ingestion	endocrine system liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 224 mg/kg	not applicable
Phenol	Ingestion	heart	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	poisoning and/or abuse

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Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Glass, oxide, chemicals	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL not available	occupational exposure
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
Diethylenetriamine	Ingestion	endocrine system liver kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1,210 mg/kg/day	90 days
Dimethyl siloxane, reaction product with silica	Inhalation	respiratory system silicosis	All data are negative	Human	NOAEL Not available	occupational exposure
4,4'-Isopropylidenediphenol	Inhalation	liver kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 0.15 mg/l	13 weeks
4,4'-Isopropylidenediphenol	Inhalation	hematopoietic system	All data are negative	Rat	NOAEL 0.15 mg/l	13 weeks
4,4'-Isopropylidenediphenol	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 50 mg/kg/day	3 generation
4,4'-Isopropylidenediphenol	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 370 mg/kg/day	13 weeks
4,4'-Isopropylidenediphenol	Ingestion	endocrine system hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 500 mg/kg/day	3 generation
4,4'-Isopropylidenediphenol	Ingestion	nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 185 mg/kg/day	90 days
4,4'-Isopropylidenediphenol	Ingestion	heart bone, teeth, nails, and/or hair	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 2,400 mg/kg/day	13 weeks
Phenol	Dermal	nervous system	May cause damage to organs though prolonged or repeated exposure	Rabbit	LOAEL 260 mg/kg/day	18 days
Phenol	Inhalation	heart liver kidney and/or bladder respiratory system	Causes damage to organs through prolonged or repeated exposure	Guinea pig	LOAEL 0.1 mg/l	41 days
Phenol	Inhalation	nervous system	May cause damage to organs though prolonged or repeated exposure	Multiple animal species	LOAEL 0.1 mg/l	14 days
Phenol	Inhalation	hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
Phenol	Inhalation	immune system	All data are negative	Rat	NOAEL 0.1 mg/l	2 weeks
Phenol	Ingestion	kidney and/or bladder	Causes damage to organs through prolonged or repeated exposure	Rat	NOAEL 12 mg/kg/day	14 days
Phenol	Ingestion	hematopoietic system	Causes damage to organs through prolonged or repeated exposure	Mouse	LOAEL 1.8 mg/kg/day	28 days
Phenol	Ingestion	nervous system	May cause damage to organs though prolonged or repeated exposure	Rat	LOAEL 308 mg/kg/day	13 weeks
Phenol	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 40 mg/kg/day	14 days
Phenol	Ingestion	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 40 mg/kg/day	14 days
Phenol	Ingestion	immune system	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 1.8 mg/kg/day	28 days
Phenol	Ingestion	endocrine system	All data are negative	Rat	NOAEL 120	14 days

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Phenol	Ingestion	skin bone, teeth, nails, and/or hair	All data are negative	Multiple animal species	mg/kg/day NOAEL 1,204 mg/kg/day	103 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 be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. Additional information leading to material classification in Section 2 is available upon request. In addition, environmental fate and effects data on ingredients may not be reflected in this section because an ingredient is present below the threshold for labelling, an ingredient is not expected to be available for exposure, or the data is considered not relevant to the material as a whole.

12.1. Toxicity

No product test data available.

Material	CAS Nbr	Organism	Type	Exposure	Test endpoint	Test result
4,4'-Isopropylidene diphenol	80-05-7	Mysid Shrimp	Experimental	96 hours	LC50	1.1 mg/l
4,4'-Isopropylidene diphenol	80-05-7	Rainbow trout	Experimental	96 hours	LC50	4 mg/l
4,4'-Isopropylidene diphenol	80-05-7	Green Algae	Experimental	96 hours	EC50	2.5 mg/l
Diethylenetriamine	111-40-0	Green Algae	Experimental	96 hours	EC50	345.6 mg/l
Diethylenetriamine	111-40-0	Water flea	Experimental	48 hours	EC50	16 mg/l
Diethylenetriamine	111-40-0	Golden Orfe	Experimental	96 hours	LC50	248 mg/l
Phenol	108-95-2	Rainbow trout	Experimental	96 hours	LC50	5.02 mg/l
Phenol	108-95-2	Water flea	Experimental	48 hours	EC50	4.2 mg/l
Phenol	108-95-2	Green algae	Experimental	96 hours	EC50	61.1 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
Titanium dioxide	13463-67-7	Sheepshead Minnow	Experimental	96 hours	LC50	>240 mg/l
Triethylenetetramine	112-24-3	Guppy	Experimental	96 hours	LC50	570 mg/l
Triethylenetetramine	112-24-3	Green algae	Experimental	72 hours	EC50	20 mg/l
Triethylenetetramine	112-24-3	Water flea	Experimental	48 hours	EC50	31.1 mg/l

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amine						
4,4'-Isopropylidene diphenol	80-05-7	Common Carp	Experimental	49 days	NOEC	0.1 mg/l
Diethylenetriamine	111-40-0	Fish	Experimental	28 days	NOEC	>10 mg/l
Diethylenetriamine	111-40-0	Water flea	Experimental	21 days	NOEC	5.6 mg/l
Phenol	108-95-2	Water flea	Experimental	11 days	NOEC	0.5 mg/l
Phenol	108-95-2	Rainbow trout	Experimental	30 days	NOEC	2 g/l
Titanium dioxide	13463-67-7	Fish	Experimental	30 days	NOEC	>=1,000 mg/l
Titanium dioxide	13463-67-7	Water flea	Experimental	30 days	NOEC	3 mg/l
Formaldehyde, oligomeric reaction products with phenol and triethylenetetramine	32610-77-8		Data not available or insufficient for classification			
Non Hazardous Ingredients	Mixture		Data not available or insufficient for classification			
Dimethyl siloxane, reaction product with silica	67762-90-7		Data not available or insufficient for classification			
Glass, oxide, chemicals	65997-17-3		Data not available or insufficient for classification			
Quartz	14808-60-7		Data not available or insufficient for classification			

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Non Hazardous Ingredients	Mixture	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Formaldehyde, oligomeric reaction products with phenol and triethylenetetramine	32610-77-8	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Dimethyl siloxane,	67762-90-7	Data not available or	N/A	N/A	N/A	N/A

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reaction product with silica		insufficient for classification				
Glass, oxide, chemicals	65997-17-3	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
4,4'-Isopropylidene diphenol	80-05-7	Experimental Biodegradation	28 days	BOD	76 % weight	OECD 301F - Manometric respirometry
Triethylenetetramine	112-24-3	Experimental Biodegradation	20 days	BOD	0 % weight	OECD 301D - Closed bottle test
Phenol	108-95-2	Experimental Photolysis		Photolytic half-life (in air)	1.11 days (t 1/2)	Other methods
Phenol	108-95-2	Experimental Biodegradation	14 days	BOD	85 % weight	OECD 301C - MITI test (I)
Diethylenetriamine	111-40-0	Estimated Photolysis		Photolytic half-life (in air)	2.6 hours (t 1/2)	Other methods
Diethylenetriamine	111-40-0	Experimental Biodegradation	14 days	BOD	0 % weight	OECD 301C - MITI test (I)
Quartz	14808-60-7	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

12.3 : Bioaccumulative potential

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Non Hazardous Ingredients	Mixture	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Formaldehyde, oligomeric reaction products with phenol and triethylenetetramine	32610-77-8	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Dimethyl siloxane, reaction product with silica	67762-90-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Glass, oxide, chemicals	65997-17-3	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
4,4'-Isopropylidene diphenol	80-05-7	Experimental BCF-Carp	42 days	Bioaccumulation factor	67.7	Other methods

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Triethylenetetramine	112-24-3	Experimental BCF-Carp	42 days	Bioaccumulation factor	<5.0	OECD 305E - Bioaccumulation flow-through fish test
Phenol	108-95-2	Experimental Bioconcentration		Log Kow	1.46	Other methods
Diethylenetriamine	111-40-0	Experimental BCF-Carp	42 days	Bioaccumulation factor	6.3	OECD 305E - Bioaccumulation flow-through fish test
Quartz	14808-60-7	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

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 uncured product 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-2001-1261-7, GR-2001-1265-8

ADR/RID: UN3259, AMINES, SOLID, CORROSIVE, N.O.S., LIMITED QUANTITY, (DIETHYLENETRIAMINE), (TRIETHYLENETETRAMINE), 8., III, (E), ADR Classification Code: C8.

IMDG-CODE: UN3259, AMINES, SOLID, CORROSIVE, N.O.S., (DIETHYLENETRIAMINE),

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(TRIETHYLENETETRAMINE), 8., III, IMDG-Code segregation code: 18- ALKALIS, LIMITED QUANTITY, Marine Pollutant, (PHENOL), EMS: FA,SB.

ICAO/IATA: UN3259, AMINES, SOLID,CORROSIVE,N.O.S., (DIETHYLENETRIAMINE), (TRIETHYLENETETRAMINE), 8, III.

GR-2001-4004-8

ADR/RID: UN3259, AMINES, SOLID, CORROSIVE, N.O.S., LIMITED QUANTITY, (DIETHYLENETRIAMINE), (TRIETHYLENETETRAMINE), 8., III, (E), ADR Classification Code: C8.

IMDG-CODE: UN3259, AMINES, SOLID, CORROSIVE,N.O.S., (DIETHYLENETRIAMINE), (TRIETHYLENETETRAMINE), 8., III, IMDG-Code segregation code: 18- ALKALIS, LIMITED QUANTITY, EMS: FA,SB.

ICAO/IATA: UN3259, AMINES, SOLID,CORROSIVE,N.O.S., (DIETHYLENETRIAMINE), (TRIETHYLENETETRAMINE), 8, III.

SECTION 15: Regulatory information

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

Carcinogenicity

<u>Ingredient</u>	<u>CAS Nbr</u>	<u>Classification</u>	<u>Regulation</u>
Phenol	108-95-2	Gr. 3: Not classifiable	International Agency for Research on Cancer
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

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

H301	Toxic if swallowed.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H331	Toxic if inhaled.

H335	May cause respiratory irritation.
H341	Suspected of causing genetic defects.
H361f	Suspected of damaging fertility.
H372	Causes damage to organs through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

List of relevant R-phrases

R20/21/22	Harmful by inhalation, in contact with skin and if swallowed.
R21	Harmful in contact with skin.
R22	Harmful if swallowed.
R23	Toxic by inhalation.
R24	Toxic in contact with skin.
R25	Toxic if swallowed.
R34	Causes burns.
R37	Irritating to respiratory system.
R41	Risk of serious damage to eyes.
R43	May cause sensitisation by skin contact.
R48/20	Harmful: danger of serious damage to health by prolonged exposure through inhalation.
R48/21	Harmful: Danger of serious damage to health by prolonged exposure in contact with skin.
R48/22	Harmful: danger of serious damage to health by prolonged exposure if swallowed.
R52	Harmful to aquatic organisms.
R52/53	Harmful to aquatic organisms. May cause long-term adverse effects in the aquatic environment.
R62	Possible risk of impaired fertility.
R68	Possible risks of irreversible effects.

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 10: Conditions to avoid physical property information was modified.
- Section 12: Bioaccumulative potential information information was modified.
- Section 11: Acute Toxicity table information was modified.
- Section 11: Serious Eye Damage/Irritation Table information was modified.
- Section 11: Skin Sensitization Table information was modified.
- Section 11: Skin Corrosion/Irritation Table information was modified.
- Section 6: Accidental release clean-up information information was modified.
- Section 13: Standard Phrase Category Waste GHS information was modified.
- Section 8: 8.1.1 Biological limit values table heading information was added.
- Section 8: BLV 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