



Safety Data Sheet

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Transportation version number:	3.00 (29/08/2013)		

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 Epoxy Ceramic Surfacers CR 511 (N) Kit (Grey)

Product Identification Numbers

GR-2001-4407-3 GR-2001-4410-7

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:

32-4069-4, 32-4070-2

TRANSPORTATION INFORMATION

GR-2001-4407-3, GR-2001-4410-7

Component 1

ADR/RID: UN2735, POLYAMINES, LIQUID, CORROSIVE, N.O.S., LIMITED QUANTITY, (M-PHENYLENEBIS(METHYLAMINE), (4,4-METHYLENEBIS(2-METHYLCYCLOHEXYLAMINE))), 8, III, (E), ADR Classification Code: C7.

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IMDG-CODE: UN2735, POLYAMINES, LIQUID, CORROSIVE, N.O.S., (M-PHENYLENEBIS(METHYLAMINE), (4,4-METHYLENEBIS(2-METHYLCYCLOHEXYLAMINE))), 8., III, IMDG-Code segregation code: 18- ALKALIS, LIMITED QUANTITY, EMS: FA, SB.

ICAO/IATA: UN2735, POLYAMINES, LIQUID, CORROSIVE, N.O.S., (M-PHENYLENEBIS(METHYLAMINE), (4,4-METHYLENEBIS(2-METHYLCYCLOHEXYLAMINE))), 8., III.

Component 2

ADR/RID: UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. LIMITED QUANTITY, (PHENOL-FORMALDEHYDE POLYMER GLYCIDYL ETHER), (4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROHYDRIN POLYMER), 9., III, (E), ADR Classification Code: M6.

IMDG-CODE: UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., (PHENOL-FORMALDEHYDE POLYMER GLYCIDYL ETHER), (4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROHYDRIN POLYMER), 9., III, IMDG-Code segregation code: NONE, LIMITED QUANTITY, EMS: FA, SF.

ICAO/IATA: UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (PHENOL-FORMALDEHYDE POLYMER GLYCIDYL ETHER), (4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROHYDRIN POLYMER), 9, III, fish and tree marking may be required (> 5kg/l).

KIT LABEL

2.2. Label elements

CLP REGULATION (EC) No 1272/2008

SIGNAL WORD

DANGER!

Symbols:

GHS05 (Corrosion) | GHS07 (Exclamation mark) | GHS09 (Environment) |

Pictograms



HAZARD STATEMENTS:

H302	Harmful if swallowed.
H332	Harmful if inhaled.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H411	Toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

Prevention:

P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P271	Use only outdoors or in a well-ventilated area.
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

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P310
P333 + P313
and easy to do. Continue rinsing.
Immediately call a POISON CENTRE or doctor/physician.
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)



Corrosive



Dangerous
for the
environment

Contains:

Consult the component labels for disclosable ingredients.

Risk phrases

R20/22 Harmful by inhalation and if swallowed.
R35 Causes severe burns.
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

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 name information was modified.
Page Heading: Product name information was modified.
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.

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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: CLP Percent Unknown - Kit information was added.



Safety Data Sheet

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Revision date:	15/04/2014	Supersedes date:	19/12/2013
Transportation version number:	3.00 (29/08/2013)		

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 Ceramic Surfacer CR 511 (N) Pt A (Grey)

Product Identification Numbers

GR-2001-4401-6 GR-2001-4405-7

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

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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	30 - 35
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	25068-38-6	10 - 15
Oxirane, mono[(C10-16-alkyloxy)methyl] derivatives	68081-84-5	1 - 10

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

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

Symbol(s)

3M Scotchkote Epoxy Ceramic Surfacer CR 511 (N) Pt A (Grey)



Irritant



Dangerous
for the
environment

Contains:

4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane; Oxirane, mono[(C10-16-alkyloxy)methyl] derivatives; 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.

Notes on labelling

2.3. Other hazards

None known.

SECTION 3: Composition/information on ingredients

Ingredient	CAS Nbr	EU Inventory	% by Wt	Classification
Phenol-formaldehyde polymer, glycidyl ether	28064-14-4		30 - 35	N:R51/53 (Vendor) R43 (Self Classified) Aquatic Chronic 2, H411 (Vendor) Skin Sens. 1, H317 (Self Classified)
Barium Sulfate	7727-43-7	EINECS 231-784-4	15 - 20	
Silicon Carbide	409-21-2	EINECS 206-991-8	15 - 20	
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	25068-38-6	NLP 500-033-5	10 - 15	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 dioxide	13463-67-7	EINECS 236-675-5	10 - 15	
Oxirane, mono[(C10-16-alkyloxy)methyl] derivatives	68081-84-5	EINECS 268-358-2	1 - 10	Xi:R36-38; R43 (Vendor) Skin Irrit. 2, H315; Eye Irrit. 2,

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				H319; Skin Sens. 1, H317 (Vendor)
Non-Hazardous Ingredients	Mixture		1 - 5	
Quartz	14808-60-7	EINECS 238-878-4	< 1	Xn:R48/20 (Vendor) STOT RE 1, H372 (Self Classified)
Carbon black	1333-86-4	EINECS 215-609-9	< 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

Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

Eye contact

Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, get medical attention.

If swallowed

Rinse mouth. If you feel unwell, get medical attention.

4.2. Most important symptoms and effects, both acute and delayed

See Section 11.1 Information on toxicological effects

4.3. Indication of any immediate medical attention and special treatment required

Not applicable.

SECTION 5: Fire-fighting measures

5.1. Extinguishing media

In case of fire: Use a fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish.

5.2. Special hazards arising from the substance or mixture

None inherent in this product.

Hazardous Decomposition or By-Products

Substance

Aldehydes.
Carbon monoxide.
Carbon dioxide.

Condition

During combustion.
During combustion.
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. 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. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorised person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and Safety Data Sheet. Seal the container. Dispose of collected material as soon as possible.

6.4. Reference to other sections

Refer to Section 8 and Section 13 for more information

SECTION 7: Handling and storage

7.1. Precautions for safe handling

For industrial or professional use only. Do not handle until all safety precautions have been read and understood. 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.

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
Carbon black	1333-86-4	Health and Safety Comm. (UK)	TWA: 3.5 mg/m ³ ; STEL: 7 mg/m ³	
Titanium dioxide	13463-67-7	Health and Safety Comm. (UK)	TWA(Inhalable):10 mg/m ³ ;TWA(respirable):4 mg/m ³	

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Silicon Carbide	409-21-2	Health and Safety Comm. (UK)	TWA(Inhalable):10 mg/m ³ ;TWA(respirable):4 mg/m ³
Barium Sulfate	7727-43-7	Health and Safety Comm. (UK)	TWA(as inhalable dust):10 mg/m ³ ;TWA(as respirable dust):4 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:

Indirect vented goggles.

Skin/hand protection

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

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

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

Respiratory protection

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

Half facepiece or full facepiece air-purifying respirator suitable for 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 epoxy odour; Grey colour

Odour threshold

No data available.

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pH	<i>No data available.</i>
Boiling point/boiling range	> 240 °C
Melting point	<i>Not applicable.</i>
Flammability (solid, gas)	Not applicable.
Explosive properties	Not classified
Oxidising properties	Not classified
Flash point	240 °C [<i>Test Method: Closed Cup</i>]
Autoignition temperature	>=400 °C
Flammable Limits(LEL)	<i>No data available.</i>
Flammable Limits(UEL)	<i>No data available.</i>
Vapour pressure	<=13.3 Pa
Relative density	1.720 [<i>Ref Std: WATER=1</i>]
Water solubility	Negligible
Solubility- non-water	<i>No data available.</i>
Partition coefficient: n-octanol/water	<i>No data available.</i>
Evaporation rate	<i>No data available.</i>
Vapour density	<i>No data available.</i>
Decomposition temperature	<i>No data available.</i>
Viscosity	<i>No data available.</i>
Density	1.72 g/ml
9.2. Other information	
Volatile organic compounds (VOC)	0 g/l [<i>Details: Part A</i>]
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

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

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Substance

None known.

Condition

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

No health effects are expected.

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.

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	Ingestion		No data available; calculated ATE >5,000 mg/kg
Phenol-formaldehyde polymer, glycidyl ether	Dermal	Rabbit	LD50 > 6,000 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
Barium Sulfate	Ingestion	Rat	LD50 > 15,000 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
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-	Ingestion	Rat	LD50 > 1,000 mg/kg

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chloro-2,3-epoxypropane			
Oxirane, mono[(C10-16-alkyloxy)methyl] derivatives	Dermal		LD50 estimated to be > 5,000 mg/kg
Oxirane, mono[(C10-16-alkyloxy)methyl] derivatives	Ingestion	Rat	LD50 > 5,000 mg/kg
Carbon black	Dermal	Rabbit	LD50 > 3,000 mg/kg
Carbon black	Ingestion	Rat	LD50 > 8,000 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
Phenol-formaldehyde polymer, glycidyl ether	Rabbit	Minimal irritation
Titanium dioxide	Rabbit	No significant irritation
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Rabbit	Mild irritant
Carbon black	Rabbit	No significant irritation
Quartz		No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Phenol-formaldehyde polymer, glycidyl ether	Rabbit	Mild irritant
Barium Sulfate	Rabbit	No significant irritation
Titanium dioxide	Rabbit	No significant irritation
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Rabbit	Moderate irritant
Carbon black	Rabbit	No significant irritation

Skin Sensitisation

Name	Species	Value
Phenol-formaldehyde polymer, glycidyl ether	Human and animal	Sensitising
Titanium dioxide	Human and animal	Not sensitizing
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	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

Germ Cell Mutagenicity

Name	Route	Value
Phenol-formaldehyde polymer, glycidyl ether	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
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
Carbon black	In Vitro	Not mutagenic
Carbon black	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
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3M Scotchkote Epoxy Ceramic Surfacer CR 511 (N) Pt A (Grey)

Titanium dioxide	Ingestion	Multiple animal species	Not carcinogenic
Titanium dioxide	Inhalation	Rat	Carcinogenic.
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
Carbon black	Dermal	Mouse	Not carcinogenic
Carbon black	Ingestion	Mouse	Not carcinogenic
Carbon black	Inhalation	Rat	Carcinogenic.
Quartz	Inhalation	Human and animal	Carcinogenic.

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
Barium Sulfate	Inhalation	pneumoconiosis	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
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
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-	Ingestion	auditory system heart endocrine system hematopoietic	All data are negative	Rat	NOAEL 1,000 mg/kg/day	28 days

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2,3-epoxypropane		system liver eyes kidney and/or bladder				
Carbon black	Inhalation	pneumoconiosis	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
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, oligomeric reaction products with 1-chloro-2,3-epoxypropane	25068-38-6	Ricefish	Experimental	96 hours	LC50	1.41 mg/l
Barium Sulfate	7727-43-7	Fish other	Experimental	96 hours	LC50	>100 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
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
4,4'-Isopropylidene diphenol, oligomeric reaction products with 1-chloro-2,3-	25068-38-6	Water flea	Experimental	21 days	NOEC	0.3 mg/l

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epoxypropane						
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
Oxirane, mono[(C10-16-alkyloxy)methyl] derivatives	68081-84-5		Data not available or insufficient for classification			
Carbon black	1333-86-4		Data not available or insufficient for classification			
Quartz	14808-60-7		Data not available or insufficient for classification			
Silicon Carbide	409-21-2		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 polymer, glycidyl ether	28064-14-4	Laboratory Biodegradation	28 days	CO2 evolution	10 % weight	OECD 301B - Modified sturm or CO2
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
Barium Sulfate	7727-43-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Carbon black	1333-86-4	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
Quartz	14808-60-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Titanium	13463-67-7	Data not	N/A	N/A	N/A	N/A

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dioxide		available or insufficient for classification				
Oxirane, mono[(C10-16-alkyloxy)methyl] derivatives	68081-84-5	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 Biodegradation	28 days	BOD	0 % weight	OECD 301C - MITI test (I)

12.3 : Bioaccumulative potential

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Carbon black	1333-86-4	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Phenol-formaldehyde polymer, glycidyl ether	28064-14-4	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Barium Sulfate	7727-43-7	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
Quartz	14808-60-7	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
Titanium dioxide	13463-67-7	Experimental BCF - Other	42 days	Bioaccumulation factor	9.6	Other methods
Oxirane, mono[(C10-16-alkyloxy)methyl] derivatives	68081-84-5	Experimental Bioconcentration		Log Kow	3.77	Other methods

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12.4. Mobility in soil

Please contact manufacturer for more details

12.5. Results of the PBT and vPvB assessment

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

12.6. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

See Section 11.1 Information on toxicological effects

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

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

EU waste code (product as sold)

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

SECTION 14: Transportation information

GR-2001-4401-6, GR-2001-4405-7

ADR/RID: UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. LIMITED QUANTITY, (PHENOL-FORMALDEHYDE POLYMER GLYCIDYL ETHER), (4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROHYDRIN POLYMER), 9., III, (E), ADR Classification Code: M6.

IMDG-CODE: UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., (PHENOL-FORMALDEHYDE POLYMER GLYCIDYL ETHER), (4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROHYDRIN POLYMER), 9., III, IMDG-Code segregation code: NONE, LIMITED QUANTITY, EMS: FA,SF.

ICAO/IATA: UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., (PHENOL-FORMALDEHYDE POLYMER GLYCIDYL ETHER), (4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROHYDRIN POLYMER), 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
Carbon black

CAS Nbr
1333-86-4

Classification
Grp. 2B: Possible human
carc.

Regulation
International Agency
for Research on Cancer

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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

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H372	Causes damage to organs through prolonged or repeated exposure.
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.
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: Respiratory protection - recommended respirators information information was modified.

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

Section 1: Product identification numbers heading information was modified.

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

Section 12: Persistence and Degradability information information was modified.

Section 10: Conditions to avoid physical property information was modified.

Section 12: Biocumulative potential information information was modified.

Copyright information was modified.

Section 11: Carcinogenicity Table information was modified.

Section 11: Serious Eye Damage/Irritation Table information was modified.

Section 11: Germ Cell Mutagenicity Table information was modified.

Section 11: Skin Sensitization Table information was modified.

Section 11: Respiratory Sensitization Table information was modified.

Section 11: Reproductive Toxicity Table information was modified.

Section 11: Skin Corrosion/Irritation Table information was modified.

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Section 11: Target Organs - Repeated Table information was modified.
Section 11: Health Effects - Inhalation information information was modified.
Section 4: First Aid - notes to physician (REACH/GHS) information was modified.
Label: Signal Word - Header information was added.
Label: Signal Word information was added.
Label: CLP Classification - Header information was added.
Label: CLP Classification information was added.
Label: CLP Classification information was added.
Label: CLP Classification - Header information was added.
Label: CLP Percent Unknown information was added.
Label: CLP Environmental Hazard Statements information was added.
Label: Graphic information was added.
Label: Graphic information was added.
Label: Symbol information was added.
Label: Symbol information was added.
Label: CLP Precautionary - Disposal information was added.
Label: CLP Precautionary - Disposal - Header information was added.
Label: CLP Precautionary - Prevention information was added.
Label: CLP Precautionary - Prevention - Header information was added.
Label: CLP Precautionary - Response information was added.
Label: CLP Precautionary - Response - Header information was added.
Label: Precautionary Statement - Header information was added.
CLP: Ingredient table information was added.
Section 2: 2.2 & 2.3. CLP REGULATION heading information was added.
Label: CLP Ingredients table Ingredient heading information was added.
Label: CLP Ingredients table CAS No heading information was added.
Label: CLP Ingredients table Percent by Wt heading information was added.
Section 2: H phrase reference information was added.
Section 8: 8.1.1 Biological limit values table heading information was added.
Section 8: BLV information was added.
Section 11: Aspiration Hazard Table information was deleted.
Section 11: Target Organs - Single Table 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

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Transportation version number:	2.00 (28/08/2013)		

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 Ceramic Surfacer CR 511 (N) Pt B

Product Identification Numbers

GR-2001-4398-4 GR-2001-4399-2

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.

E Mail: tox.uk@mmm.com

Website: www.3M.com/uk

1.4. Emergency telephone number

+44 (0)1344 858 000

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

CLP REGULATION (EC) No 1272/2008

CLASSIFICATION:

Acute Toxicity, Category 4 - Acute Tox. 4; H302

Acute Toxicity, Category 4 - Acute Tox. 4; H332

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

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

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

For full text of H phrases, see Section 16.

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

Indication of danger

Harmful; Xn; R20/22

Corrosive; C; R35

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) |

Pictograms



Ingredient	CAS Nbr	% by Wt
Benzyl Alcohol	100-51-6	30 - 60
Formaldehyde, polymer with benzenamine, hydrogenated	135108-88-2	20 - 30
Formaldehyde, oligomeric reaction products with phenol and m-phenylenebis(methylamine)	57214-10-5	10 - 20
m-phenylenebis(methylamine)	1477-55-0	5 - 15
4,4'-Methylenebis(cyclohexylamine)	1761-71-3	1 - 5
Salicylic acid	69-72-7	1 - 5

HAZARD STATEMENTS:

H302	Harmful if swallowed.
H332	Harmful if inhaled.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.

PRECAUTIONARY STATEMENTS

Prevention:

P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P271	Use only outdoors or in a well-ventilated area.
P280D	Wear protective gloves, protective clothing, and eye/face protection.

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

71% of the mixture consists of components of unknown acute dermal toxicity.

46% of the mixture consists of components of unknown acute inhalation toxicity.

Contains 45% of components with unknown hazards to the aquatic environment.

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

Symbol(s)



Corrosive

Contains:

Benzyl Alcohol; m-phenylenebis(methylamine)

Risk phrases

R20/22 Harmful by inhalation and if swallowed.
R35 Causes severe burns.
R43 May cause sensitisation by skin contact.

Safety phrases

S23C Do not breathe vapour or spray.
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
Benzyl Alcohol	100-51-6	EINECS 202-859-9	30 - 60	Xn:R20-22 (EU) Acute Tox. 4, H332; Acute Tox. 4, H302 (CLP)
Formaldehyde, polymer with benzenamine, hydrogenated	135108-88-2		20 - 30	C:R34; Xn:R22 (Vendor) Acute Tox. 4, H302; Skin Corr. 1B, H314 (Vendor)
Formaldehyde, oligomeric reaction products with phenol and m-phenylenebis(methylamine)	57214-10-5	NLP 500-137-0	10 - 20	C:R34 (Vendor) Skin Corr. 1B, H314 (Vendor)
m-phenylenebis(methylamine)	1477-55-0	EINECS 216-032-5	5 - 15	T:R23; C:R35; Xn:R22; R43; R52/53 (Self Classified) Acute Tox. 3, H331; Acute Tox. 4, H302; Skin Corr. 1A, H314; Skin Sens. 1, H317; Aquatic Chronic 3, H412 (Self Classified)
4,4'-Methylenebis(cyclohexylamine)	1761-71-3	EINECS 217-168-8	1 - 5	C:R35 (Vendor) Xn:R22 (Self Classified)

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				Skin Corr. 1A, H314 (Vendor) Acute Tox. 4, H302 (Self Classified)
Salicylic acid	69-72-7	EINECS 200-712-3	1 - 5	Repr.Cat.3:R63; Xn:R22; Xi:R36 (Self Classified) Acute Tox. 4, H302; Eye Irrit. 2, H319; Repr. 2, H361d (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.

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

Substance

Carbon monoxide.
Carbon dioxide.
Oxides of nitrogen.

Condition

During combustion.
During combustion.
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. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapours, in accordance with good industrial hygiene practice. Warning: A motor could be an ignition source and could cause flammable gases or vapours in the spill area to burn or explode.

6.2. Environmental precautions

Avoid release to the environment. 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. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorised person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and Safety Data Sheet. Seal the container. Dispose of collected material as soon as possible.

6.4. Reference to other sections

Refer to Section 8 and Section 13 for more information

SECTION 7: Handling and storage

7.1. Precautions for safe handling

For industrial or professional use only. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Avoid contact with oxidising agents (eg. chlorine, chromic acid etc.) Use personal protective equipment (eg. gloves, respirators...) as required.

7.2. Conditions for safe storage including any incompatibilities

Store in a well-ventilated place. Keep container tightly closed to prevent contamination with water or air. If contamination is suspected, do not reseal container. Store away from acids. Store away from strong bases. Store away from oxidising agents. Store away from areas where product may come into contact with food or pharmaceuticals.

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

No occupational exposure limit values exist for any of the components listed in Section 3 of this Safety Data Sheet.

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

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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.

Polymer laminate

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

Apron - polymer laminate

Respiratory protection

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

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

For questions about suitability for a specific application, consult with your respirator manufacturer.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid.
Appearance/Odour	Ammonia Odour, Amber Colour
Odour threshold	<i>No data available.</i>
pH	> 8 [<i>Details: Alkaline</i>]
Boiling point/boiling range	107.2 - 222 °C
Melting point	<i>Not applicable.</i>
Flammability (solid, gas)	Not applicable.
Explosive properties	Not classified
Oxidising properties	Not classified
Flash point	≥104 °C [<i>Test Method: Closed Cup</i>]
Autoignition temperature	<i>No data available.</i>
Flammable Limits(LEL)	<i>No data available.</i>
Flammable Limits(UEL)	<i>No data available.</i>
Vapour pressure	93.3 - 999.9 Pa [<i>@ 25 °C</i>]
Relative density	1.080 [<i>Ref Std: WATER=1</i>]
Water solubility	0 %

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Solubility- non-water	<i>No data available.</i>
Partition coefficient: n-octanol/water	<i>No data available.</i>
Evaporation rate	<i>No data available.</i>
Vapour density	<i>No data available.</i>
Decomposition temperature	<i>No data available.</i>
Viscosity	<i>No data available.</i>
Density	1.08 g/ml

9.2. Other information

Volatile organic compounds (VOC)	0 g/l [<i>Details:Part B</i>]
Percent volatile	0 %

SECTION 10: Stability and reactivity

10.1 Reactivity

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

10.2 Chemical stability

Stable.

10.3 Possibility of hazardous reactions

Hazardous polymerisation will not occur.

10.4 Conditions to avoid

Avoid curing large quantities of material to prevent a premature reaction (exotherm) 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

Harmful if inhaled. Respiratory tract irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. May cause target organ effects after inhalation.

Skin contact

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.

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:

Central nervous system (CNS) depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

Reproductive/Developmental Toxicity:

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

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 ATE >5,000 mg/kg
Overall product	Inhalation-Dust/Mist(4 hr)		No data available; calculated ATE1 - 5 mg/l
Overall product	Ingestion		No data available; calculated ATE300 - 2,000 mg/kg
Benzyl Alcohol	Inhalation-Dust/Mist (4 hours)	Rat	LC50 8.8 mg/l
Benzyl Alcohol	Ingestion	Rat	LD50 1,230 mg/kg
m-phenylenebis(methylamine)	Dermal	Rabbit	LD50 > 2,000 mg/kg
m-phenylenebis(methylamine)	Inhalation-Dust/Mist (4 hours)	Rat	LC50 0.8 mg/l
m-phenylenebis(methylamine)	Ingestion	Rat	LD50 980 mg/kg
4,4'-Methylenebis(cyclohexylamine)	Dermal	Rabbit	LD50 2,110 mg/kg
4,4'-Methylenebis(cyclohexylamine)	Ingestion	Rat	LD50 625 mg/kg
Salicylic acid	Dermal	Rat	LD50 > 2,000 mg/kg

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Salicylic acid	Ingestion	Rat	LD50 891 mg/kg
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ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Benzyl Alcohol	Multiple animal species	Mild irritant
m-phenylenebis(methylamine)	Rat	Corrosive
Salicylic acid	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Benzyl Alcohol	Rabbit	Severe irritant
m-phenylenebis(methylamine)	Rabbit	Corrosive
Salicylic acid	Rabbit	Corrosive

Skin Sensitisation

Name	Species	Value
Benzyl Alcohol	Human and animal	Some positive data exist, but the data are not sufficient for classification
m-phenylenebis(methylamine)	Guinea pig	Sensitising
Salicylic acid	Mouse	Not sensitizing

Photosensitisation

Name	Species	Value
Salicylic acid	Mouse	Not sensitizing

Respiratory Sensitisation

Name	Species	Value
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Germ Cell Mutagenicity

Name	Route	Value
Benzyl Alcohol	In vivo	Not mutagenic
Benzyl Alcohol	In Vitro	Some positive data exist, but the data are not sufficient for classification
m-phenylenebis(methylamine)	In Vitro	Not mutagenic
m-phenylenebis(methylamine)	In vivo	Not mutagenic
Salicylic acid	In Vitro	Not mutagenic
Salicylic acid	In vivo	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Benzyl Alcohol	Ingestion	Multiple animal species	Not carcinogenic

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

Name	Route	Value	Species	Test result	Exposure Duration
Benzyl Alcohol	Ingestion	Not toxic to development	Mouse	NOAEL 550 mg/kg/day	during organogenesis
m-phenylenebis(methylamine)	Ingestion	Not toxic to female reproduction	Rat	NOAEL 450 mg/kg/day	1 generation
m-phenylenebis(methylamine)	Ingestion	Not toxic to male reproduction	Rat	NOAEL 450 mg/kg	1 generation
m-phenylenebis(methylamine)	Ingestion	Not toxic to development	Rat	NOAEL 450	1 generation

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Salicylic acid	Ingestion	Toxic to development	Rat	mg/kg/day NOAEL 75 mg/kg/day	during organogenesis
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Target Organ(s)**Specific Target Organ Toxicity - single exposure**

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Benzyl Alcohol	Inhalation	central nervous system depression	May cause drowsiness or dizziness		NOAEL Not available	
Benzyl Alcohol	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
Benzyl Alcohol	Ingestion	central nervous system depression	May cause drowsiness or dizziness		NOAEL Not available	
m-phenylenebis(methylamine)	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Not available	NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Benzyl Alcohol	Ingestion	endocrine system muscles kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 400 mg/kg/day	13 weeks
Benzyl Alcohol	Ingestion	nervous system respiratory system	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 645 mg/kg/day	8 days
m-phenylenebis(methylamine)	Ingestion	endocrine system blood bone marrow	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 600 mg/kg/day	28 days
Salicylic acid	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 500 mg/kg/day	3 days

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
Formaldehyde, polymer with benzenamine, hydrogenated	135108-88-2		Data not available or insufficient for classification			

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Formaldehyde, oligomeric reaction products with phenol and m-phenylenebis(methylamine)	57214-10-5		Data not available or insufficient for classification			
4,4'-Methylenebis(cyclohexylamine)	1761-71-3		Data not available or insufficient for classification			
Salicylic acid	69-72-7	Water flea	Experimental	48 hours	EC50	870 mg/l
m-phenylenebis(methylamine)	1477-55-0	Ricefish	Experimental	96 hours	LC50	87.6 mg/l
m-phenylenebis(methylamine)	1477-55-0	Water flea	Experimental	48 hours	EC50	15.2 mg/l
m-phenylenebis(methylamine)	1477-55-0	Water flea	Experimental	21 days	NOEC	4.7 mg/l
m-phenylenebis(methylamine)	1477-55-0	Green Algae	Experimental	72 hours	NOEC	9.8 mg/l
m-phenylenebis(methylamine)	1477-55-0	Green Algae	Experimental	72 hours	EC50	28 mg/l
Benzyl Alcohol	100-51-6	Algae	Experimental	96 hours	EC50	640 mg/l
Benzyl Alcohol	100-51-6	Fathead minnow	Experimental	96 hours	LC50	460 mg/l
Benzyl Alcohol	100-51-6	Water flea	Experimental	48 hours	EC50	360 mg/l

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
4,4'-Methylenebis(cyclohexylamine)	1761-71-3	Estimated Photolysis		Photolytic half-life (in air)	3.30 hours (t _{1/2})	Other methods
Formaldehyde, oligomeric reaction products with phenol and m-phenylenebis(methylamine)	57214-10-5	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Formaldehyde, polymer with benzenamine, hydrogenated	135108-88-2	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Salicylic acid	69-72-7	Experimental Biodegradation	14 days	BOD	88.1 % weight	OECD 301C - MITI test (I)
m-	1477-55-0	Experimental	28 days	CO2 evolution	49 % weight	OECD 301B -

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phenylenebis(methylamine)		Biodegradation				Modified Sturm or CO2
Benzyl Alcohol	100-51-6	Experimental Biodegradation	14 days	BOD	94 % weight	OECD 301C - MITI test (I)

12.3 : Bioaccumulative potential

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Formaldehyde, polymer with benzenamine, hydrogenated	135108-88-2	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Formaldehyde, oligomeric reaction products with phenol and m-phenylenebis(methylamine)	57214-10-5	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
m-phenylenebis(methylamine)	1477-55-0	Experimental BCF-Carp	42 days	Bioaccumulation factor	<2.7	OECD 305E - Bioaccumulation flow-through fish test
4,4'-Methylenebis(cyclohexylamine)	1761-71-3	Experimental Bioconcentration		Log Kow	2.03	Other methods
Salicylic acid	69-72-7	Experimental Bioconcentration		Log Kow	2.26	Other methods
Benzyl Alcohol	100-51-6	Experimental Bioconcentration		Log Kow	1.10	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 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.

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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-2001-4398-4, GR-2001-4399-2

ADR/RID: UN2735, POLYAMINES, LIQUID, CORROSIVE, N.O.S., LIMITED QUANTITY, (M-PHENYLENEBIS(METHYLAMINE), (4,4-METHYLENEBIS(2-METHYLCYCLOHEXYLAMINE))), 8, III, (E), ADR Classification Code: C7.

IMDG-CODE: UN2735, POLYAMINES, LIQUID, CORROSIVE, N.O.S., (M-PHENYLENEBIS(METHYLAMINE), (4,4-METHYLENEBIS(2-METHYLCYCLOHEXYLAMINE))), 8., III, IMDG-Code segregation code: 18- ALKALIS, LIMITED QUANTITY, EMS: FA, SB.

ICAO/IATA: UN2735, POLYAMINES, LIQUID, CORROSIVE, N.O.S., (M-PHENYLENEBIS(METHYLAMINE), (4,4-METHYLENEBIS(2-METHYLCYCLOHEXYLAMINE))), 8., III.

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 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 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.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H361d	Suspected of damaging the unborn child.
H412	Harmful to aquatic life with long lasting effects.

List of relevant R-phrases

R20	Harmful by inhalation.
R20/22	Harmful by inhalation and if swallowed.

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R22	Harmful if swallowed.
R23	Toxic by inhalation.
R34	Causes burns.
R35	Causes severe burns.
R36	Irritating to eyes.
R43	May cause sensitisation by skin contact.
R52/53	Harmful to aquatic organisms. May cause long-term adverse effects in the aquatic environment.
R63	Possible risk of harm to the unborn child.

Revision information:

Revision Changes:

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 12: Component ecotoxicity information information was modified.

Section 11: Acute Toxicity table information was modified.

Section 7: Conditions safe storage information was modified.

Section 4: First Aid - notes to physician (REACH/GHS) 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