



Safety Data Sheet

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Document group:	16-3085-4	Version number:	11.00
Revision date:	26/09/2013	Supersedes date:	04/10/2012
Transportation version number:	3.00 (28/04/2012)		

This Safety Data Sheet has been prepared in accordance with the REACH Regulation (EC) 1907/2006 and its modifications.

IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

3M TC-2707 Thermally Conductive Adhesive

Product identification numbers

62-2661-1435-4

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

Adhesive

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:

16-3082-1, 16-3083-9

TRANSPORTATION INFORMATION

62-2661-1435-4

Component 1

ADR/RID: UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. LIMITED QUANTITY, (BISPHENOL A-EPICHLOROHYDRIN COPOLYMER), 9., III, (E), ADR Classification Code: M6.

IMDG-CODE: UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., (BISPHENOL A-EPICHLOROHYDRIN COPOLYMER), 9., III, LIMITED QUANTITY, EMS: FA, SF.

ICAO/IATA: UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., (BISPHENOL A-

3M TC-2707 Thermally Conductive Adhesive

EPICHLOROHYDRIN COPOLYMER), 9., III, fish and tree marking may be required (> 5kg/l).

Component 2

ADR/RID: UN2735, AMINES, LIQUID, CORROSIVE, N.O.S. LIMITED QUANTITY, (CONTAINS 4,7,10-TRIOXATRIDECANE-1,13-DIAMINE3,3'Oxybis(ethyleneoxy)bis(propylamine)), 8., II , (E), ADR Classification Code: C7.

IMDG-CODE: UN2735, AMINES, LIQUID, CORROSIVE, N.O.S., (CONTAINS 4,7,10-TRIOXATRIDECANE-1,13-DIAMINE3,3'Oxybis(ethyleneoxy)bis(propylamine)), 8., II , IMDG-Code segregation code: 18- ALKALIS, LIMITED QUANTITY, EMS: FA,SB.

ICAO/IATA: UN2735, AMINES, LIQUID, CORROSIVE, N.O.S., (CONTAINS 4,7,10-TRIOXATRIDECANE-1,13-DIAMINE3,3'Oxybis(ethyleneoxy)bis(propylamine)), 8., II .

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:

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.

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 CENTER 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.

SUPPLEMENTAL INFORMATION

Supplemental Hazard Statements:

EUH205 Contains epoxy constituents. May produce an allergic reaction.

Notes on labelling

For ingredient disclosure, see documents 16-3082-1 and 16-3083-9

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

R34	Causes 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.
S24	Avoid contact with skin.
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:

Copyright information was modified.

Section 1: Product use information information was added.

Label: Signal Word - Header information was added.

Label: Signal Word information was added.

Label: CLP Classification information was added.

Label: CLP Classification - Header information was added.

Label: CLP Environmental Hazard Statements information was added.

Label: Graphic information was added.

Label: Graphic information was added.

Label: Symbol information was added.

Label: Symbol information was added.

Label: CLP Precautionary - Disposal information was added.
Label: CLP Precautionary - Disposal - Header information was added.
Label: CLP Precautionary - Prevention information was added.
Label: CLP Precautionary - Prevention - Header information was added.
Label: CLP Precautionary - Response information was added.
Label: CLP Precautionary - Response - Header information was added.
Label: Precautionary Statement - Header information was added.
Label: CLP Supplemental Hazard Statements information was added.
Label: CLP Supplemental Hazard Statements - Header information was added.
Label: CLP Supplemental Information - Header information was added.
Section 2: Notes on labelling heading information was added.
Section 15: Label remarks and EU Detergent information was added.
Section 2: 2.2 & 2.3. CLP REGULATION heading information was added.



Safety Data Sheet

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Document group:	16-3082-1	Version number:	7.00
Revision date:	26/09/2013	Supersedes date:	17/09/2012
Transportation version number:	1.00 (10/05/2011)		

This Safety Data Sheet has been prepared in accordance with the REACH Regulation (EC) 1907/2006 and its modifications.

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

3M Thermally Conductive Adhesive TC-2707 (Part A)

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

Identified uses

Adhesive

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

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

For full text of H phrases, see Section 16.

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

Indication of danger

Corrosive; C; R34

Sensitizing; R43

Dangerous for the environment; R52/53

For full text of R phrases, see Section 16.

2.2. Label elements

CLP REGULATION (EC) No 1272/2008

SIGNAL WORD

DANGER!

Symbols:

GHS05 (Corrosion) | GHS07 (Exclamation mark) |

Pictograms



Ingredient	CAS Nbr	% by Wt
3,3'-Oxybis(ethyleneoxy)bis(propylamine)	4246-51-9	15 - 40
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	25068-38-6	1 - 5

HAZARD STATEMENTS:

H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H412	Harmful 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.

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 CENTER 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.
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SUPPLEMENTAL INFORMATION

Supplemental Hazard Statements:

EUH205	Contains epoxy constituents. May produce an allergic reaction.
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Contains 26% of components with unknown hazards to the aquatic environment.

3M Thermally Conductive Adhesive TC-2707 (Part A)

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

Symbol(s)



Corrosive

Contains:

4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane; 3,3'-Oxybis(ethyleneoxy)bis(propylamine)

Risk phrases

R34 Causes burns.
R43 May cause sensitisation by skin contact.
R52/53 Harmful to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

Safety phrases

S23A Do not breathe vapour.
S24 Avoid contact with skin.
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.

2.3. Other hazards

None known.

SECTION 3: Composition/information on ingredients

Ingredient	CAS Nbr	EU Inventory	% by Wt	Classification
Aluminium	7429-90-5	EINECS 231-072-3	40 - 70	F:R11-15 - Nota T (EU) Flam. Sol. 1, H228; Water-react. 2, H261 - Nota T (CLP)
3,3'-Oxybis(ethyleneoxy)bis(propylamine)	4246-51-9	EINECS 224-207-2	15 - 40	C:R34; R52/53 (Self Classified) Skin Corr. 1B, H314; Aquatic Chronic 3, H412 (Self Classified)
modified diglycidyl ether of bisphenol a	Trade Secret		7 - 13	
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	25068-38-6	NLP 500-033-5	1 - 5	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)
Silane, trimethoxyoctyl-, hydrolysis	92797-60-9	EINECS 296-	1 - 5	

3M Thermally Conductive Adhesive TC-2707 (Part A)

products with silica		597-2		
2,4,6-Tris(dimethylaminomethyl)phenol	90-72-2	EINECS 202-013-9	1 - 5	Xn:R22; Xi:R36-38 (EU) Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2, H319 (CLP)
Silicon dioxide	7631-86-9	EINECS 231-545-4	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 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.

Condition

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.

6.3. Methods and material for containment and cleaning up

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 toxic, corrosivity or flammability hazard. Place in a closed container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorised person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and Safety Data Sheet. Dispose of collected material as soon as possible. Contain spill. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible. Seal the container.

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

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

7.2. Conditions for safe storage including any incompatibilities

Store away from acids. 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

Ingredient	CAS Nbr	Agency	Limit type	Additional comments
Aluminium	7429-90-5	Health and Safety Comm. (UK)	TWA(as inhalable dust):10 mg/m ³ ;TWA(as respirable dust):4 mg/m ³	
Silica, amorphous	7631-86-9	Health and Safety Comm. (UK)	TWA(as inhalable dust):6 mg/m ³ ;TWA(as respirable dust):2.4 mg/m ³	

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

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

8.2. Exposure controls

8.2.1. Engineering controls

Provide ventilated enclosure for heat curing. Curing enclosures must be exhausted to outdoors or to a suitable emission control device. 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

Wear eye/face protection.

The following eye protection(s) are recommended: Safety glasses with side shields.

Indirect vented goggles.

Skin/hand protection

Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials.

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

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

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid.
Specific Physical Form:	Viscous.
Appearance/Odour	grey, very mild pungent odour.
Odour threshold	<i>No data available.</i>
pH	<i>No data available.</i>
Boiling point/boiling range	<i>Not applicable.</i>
Melting point	<i>Not applicable.</i>
Flammability (solid, gas)	Not applicable.
Explosive properties	Not classified
Oxidising properties	Not classified
Flash point	140 °C [<i>Test Method: Estimated</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	0.3 Pa [<i>@ 20 °C</i>]
Relative density	1.52 [<i>Ref Std: WATER=1</i>]
Water solubility	Negligible
Solubility- non-water	<i>No data available.</i>

3M Thermally Conductive Adhesive TC-2707 (Part A)

Partition coefficient: n-octanol/water	No data available.
Evaporation rate	Not applicable.
Vapour density	Nil
Decomposition temperature	No data available.
Viscosity	47 Pa-s [@ 20 °C]
Density	1.52 g/ml

9.2. Other information

Volatile organic compounds (VOC)	10.6 g/l [Test Method:EPA method 24A]
Percent volatile	0.00 % weight
VOC less H2O & exempt solvents	10.6 g/l [Test Method:EPA method 24A]

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 reaction (exotherm) with production of intense heat and smoke.

10.5 Incompatible materials

Strong acids.

Strong oxidising agents.

10.6 Hazardous decomposition products

<u>Substance</u>	<u>Condition</u>
Aldehydes.	Not specified.

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:

3M Thermally Conductive Adhesive TC-2707 (Part A)

Inhalation

Respiratory tract irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. Vapours from heated material may cause irritation of the respiratory system: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, nose and throat pain.

Skin contact

Corrosive (skin burns): Signs/symptoms may include localised redness, swelling, itching, intense pain, blistering, ulceration, and tissue destruction.

Prolonged or repeated exposure may cause:

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. Vapours from heated material may cause eye irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Ingestion

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.

Toxicological Data

Acute Toxicity

Name	Route	Species	Value
Overall product	Ingestion		Data not available or insufficient for classification; calculated ATE >5,000 mg/kg
Aluminium	Dermal		LD50 estimated to be > 5,000 mg/kg
Aluminium	Ingestion		LD50 estimated to be > 5,000 mg/kg
Aluminium	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > .888 mg/l
3,3'-Oxybis(ethyleneoxy)bis(propylamine)	Dermal	Rabbit	LD50 2,500 mg/kg
3,3'-Oxybis(ethyleneoxy)bis(propylamine)	Ingestion	Rat	LD50 3,160 mg/kg
modified diglycidyl ether of bisphenol a	Dermal	Not available	LD50 3,000 mg/kg
modified diglycidyl ether of bisphenol a	Ingestion	Not available	LD50 > 34,000 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
Silane, trimethoxyoctyl-, hydrolysis products with silica	Dermal		LD50 estimated to be > 5,000 mg/kg
Silicon dioxide	Dermal	Rabbit	LD50 > 5,000 mg/kg
Silane, trimethoxyoctyl-, hydrolysis products with silica	Ingestion	Rat	LD50 > 5,340 mg/kg
Silicon dioxide	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Silicon dioxide	Ingestion	Rat	LD50 > 5,110 mg/kg
2,4,6-Tris(dimethylaminomethyl)phenol	Dermal	Rat	LD50 1,280 mg/kg
2,4,6-Tris(dimethylaminomethyl)phenol	Ingestion	Rat	LD50 1,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Aluminium	Rabbit	No significant irritation
3,3'-Oxybis(ethyleneoxy)bis(propylamine)	Rabbit	Corrosive
modified diglycidyl ether of bisphenol a		No significant irritation
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Rabbit	Mild irritant
Silane, trimethoxyoctyl-, hydrolysis products with silica		Data not available or insufficient for classification
Silicon dioxide	Rabbit	No significant irritation
2,4,6-Tris(dimethylaminomethyl)phenol	Rabbit	Corrosive

3M Thermally Conductive Adhesive TC-2707 (Part A)**Serious Eye Damage/Irritation**

Name	Species	Value
Aluminium	Rabbit	No significant irritation
3,3'-Oxybis(ethyleneoxy)bis(propylamine)	similar health hazards	Corrosive
modified diglycidyl ether of bisphenol a		No significant irritation
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Rabbit	Moderate irritant
Silane, trimethoxyoctyl-, hydrolysis products with silica		Data not available or insufficient for classification
Silicon dioxide	Rabbit	No significant irritation
2,4,6-Tris(dimethylaminomethyl)phenol	Rabbit	Corrosive

Skin Sensitisation

Name	Species	Value
Aluminium	Guinea pig	Not sensitizing
3,3'-Oxybis(ethyleneoxy)bis(propylamine)		Data not available or insufficient for classification
modified diglycidyl ether of bisphenol a		Not sensitizing
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Human and animal	Sensitising
Silane, trimethoxyoctyl-, hydrolysis products with silica		Data not available or insufficient for classification
Silicon dioxide	Human and animal	Not sensitizing
2,4,6-Tris(dimethylaminomethyl)phenol	Guinea pig	Some positive data exist, but the data are not sufficient for classification

Respiratory Sensitisation

Name	Species	Value
Aluminium	Human	Some positive data exist, but the data are not sufficient for classification
3,3'-Oxybis(ethyleneoxy)bis(propylamine)		Data not available or insufficient for classification
modified diglycidyl ether of bisphenol a		Data not available or insufficient for classification
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
Silane, trimethoxyoctyl-, hydrolysis products with silica		Data not available or insufficient for classification
Silicon dioxide		Data not available or insufficient for classification
2,4,6-Tris(dimethylaminomethyl)phenol		Data not available or insufficient for classification

Germ Cell Mutagenicity

Name	Route	Value
Aluminium	In Vitro	Not mutagenic
3,3'-Oxybis(ethyleneoxy)bis(propylamine)		Data not available or insufficient for classification
modified diglycidyl ether of bisphenol a		Data not available or insufficient for classification
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
Silane, trimethoxyoctyl-, hydrolysis products with silica		Data not available or insufficient for classification
Silicon dioxide	In Vitro	Not mutagenic
2,4,6-Tris(dimethylaminomethyl)phenol	In Vitro	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Aluminium			Data not available or insufficient for classification
3,3'-Oxybis(ethyleneoxy)bis(propylamine)			Data not available or insufficient for classification
modified diglycidyl ether of bisphenol a			Data not available or insufficient for classification
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
Silane, trimethoxyoctyl-, hydrolysis products with silica			Data not available or insufficient for classification
Silicon dioxide	Not specified.	Mouse	Some positive data exist, but the data are not sufficient for classification

3M Thermally Conductive Adhesive TC-2707 (Part A)

2,4,6-Tris(dimethylaminomethyl)phenol			Data not available or insufficient for classification
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Reproductive Toxicity**Reproductive and/or Developmental Effects**

Name	Route	Value	Species	Test result	Exposure Duration
3,3'-Oxybis(ethyleneoxy)bis(propylamine)		Data not available or insufficient for classification			
modified diglycidyl ether of bisphenol a		Data not available or insufficient for classification			
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
Silane, trimethoxyoctyl-, hydrolysis products with silica		Data not available or insufficient for classification			
Silicon dioxide	Ingestion	Not toxic to female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Silicon dioxide	Ingestion	Not toxic to male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Silicon dioxide	Ingestion	Not toxic to development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
2,4,6-Tris(dimethylaminomethyl)phenol		Data not available or insufficient for classification			

Target Organ(s)**Specific Target Organ Toxicity - single exposure**

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
3,3'-Oxybis(ethyleneoxy)bis(propylamine)	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
modified diglycidyl ether of bisphenol a			Data not available or insufficient for classification			
Silane, trimethoxyoctyl-, hydrolysis products with silica			Data not available or insufficient for classification			
Silicon dioxide			Data not available or insufficient for classification			
2,4,6-Tris(dimethylaminomethyl)phenol	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Aluminium	Inhalation	nervous system respiratory system	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
3,3'-Oxybis(ethyleneoxy)bis(propylamine)			Data not available or insufficient for classification			
modified diglycidyl ether of bisphenol a			Data not available or insufficient for classification			
4,4'-	Dermal	liver	Some positive data exist, but the	Rat	NOAEL	2 years

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Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane			data are not sufficient for classification		1,000 mg/kg/day	
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
Silicon dioxide	Inhalation	respiratory system silicosis	All data are negative	Human	NOAEL Not available	occupational exposure
Silane, trimethoxyoctyl-, hydrolysis products with silica			Data not available or insufficient for classification			
2,4,6-Tris(dimethylaminomethyl)phenol	Dermal	skin liver nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 125 mg/kg/day	28 days
2,4,6-Tris(dimethylaminomethyl)phenol	Dermal	auditory system hematopoietic system eyes	All data are negative	Rat	NOAEL 125 mg/kg/day	28 days

Aspiration Hazard

Name	Value
Aluminium	Not an aspiration hazard
3,3'-Oxybis(ethyleneoxy)bis(propylamine)	Not an aspiration hazard
modified diglycidyl ether of bisphenol a	Not an aspiration hazard
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Not an aspiration hazard
Silane, trimethoxyoctyl-, hydrolysis products with silica	Not an aspiration hazard
Silicon dioxide	Not an aspiration hazard
2,4,6-Tris(dimethylaminomethyl)phenol	Not an aspiration hazard

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

SECTION 12: Ecological information

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

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-	25068-38-6	Ricefish	Experimental	96 hours	LC50	1.41 mg/l

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epoxypropane						
3,3'-Oxybis(ethylenoxy)bis(propylamine)	4246-51-9	Crustacea	Experimental	48 hours	EC50	220 mg/l
3,3'-Oxybis(ethylenoxy)bis(propylamine)	4246-51-9	Golden Orfe	Experimental	96 hours	LC50	220 mg/l
3,3'-Oxybis(ethylenoxy)bis(propylamine)	4246-51-9	Algae	Experimental	72 hours	EC50	69 mg/l
2,4,6-Tris(dimethylaminomethyl)phenol	90-72-2	Common Carp	Experimental	96 hours	LC50	175 mg/l
2,4,6-Tris(dimethylaminomethyl)phenol	90-72-2	Grass Shrimp	Experimental	96 hours	LC50	718 mg/l
Silane, trimethoxyoctyl-, hydrolysis products with silica	92797-60-9	Zebra Fish	Experimental	96 hours	NOEC	>=10,000 mg/l
Silane, trimethoxyoctyl-, hydrolysis products with silica	92797-60-9	Algae	Experimental	72 hours	EC50	>=10,000 mg/l
Silane, trimethoxyoctyl-, hydrolysis products with silica	92797-60-9	Water flea	Experimental	24 hours	NOEC	>=10,000 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
modified diglycidyl ether of bisphenol a	Trade Secret		Data not available or insufficient for classification			% weight
Aluminium	7429-90-5		Data not available or insufficient for classification			
Silicon dioxide	7631-86-9		Data not available or insufficient for			

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			classification			
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12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
modified diglycidyl ether of bisphenol a	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
3,3'-Oxybis(ethylenoxy)bis(propylamine)	4246-51-9	Estimated Biodegradation	28 days	BOD	12.6 % weight	OECD 301C - MITI test (I)
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)
Silane, trimethoxyoctyl-, hydrolysis products with silica	92797-60-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
2,4,6-Tris(dimethylaminomethyl)phenol	90-72-2	Experimental Biodegradation	28 days	BOD	4 % weight	OECD 301D - Closed bottle test
Aluminium	7429-90-5	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Silicon dioxide	7631-86-9	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
modified diglycidyl ether of bisphenol a	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
3,3'-	4246-51-9	Estimated		Log Kow	-1.46	Other methods

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Oxybis(ethyleneoxy)bis(propylamine)		Bioconcentration				
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
Silane, trimethoxyoctyl-, hydrolysis products with silica	92797-60-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
2,4,6-Tris(dimethylaminomethyl)phenol	90-72-2	Experimental Bioconcentration		Log Kow	-0.66	Other methods
Aluminium	7429-90-5	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Silicon dioxide	7631-86-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

12.4. Mobility in soil

Please contact manufacturer for more details

12.5. Results of the PBT and vPvB assessment

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

12.6. Other adverse effects

No information available.

SECTION 13: Disposal considerations**13.1 Waste treatment methods**

Dispose of contents/ container in accordance with the local/regional/national/international regulations

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. Combustion products will include halogen acid (HCl/HF/HBr). Facility must be capable of handling halogenated materials. If no other disposal options are available, waste product that has been completely cured or polymerised may be placed in a landfill properly designed for industrial waste. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

The coding of a waste stream is based on the application of the product by the consumer. Since this is out of the control of

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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 04 09* Waste adhesives and sealants containing organic solvents or other dangerous substances
20 01 27* Paint, inks, adhesives and resins containing dangerous substances

SECTION 14: Transportation information

ADR: UN2735 Amines, liquid, corrosive, N.O.S. (contains 4,7,10-trioxatridecane-1,13-diamine); 8; II; (E); C7

IATA: UN2735 Amines, liquid, corrosive, N.O.S. (contains 4,7,10-trioxatridecane-1,13-diamine); 8; II

IMDG: UN2735 Amines, liquid, corrosive, N.O.S. (contains 4,7,10-trioxatridecane-1,13-diamine); 8; II; EmS: F-A, S-B

SECTION 15: Regulatory information

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

Carcinogenicity

Ingredient

Silicon dioxide

CAS Nbr

7631-86-9

Classification

Gr. 3: Not classifiable

Regulation

International Agency
for Research on Cancer

Global inventory status

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

15.2. Chemical Safety Assessment

Not applicable

SECTION 16: Other information

List of relevant H statements

H228	Flammable solid.
H261	In contact with water releases flammable gas.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
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.
H412	Harmful to aquatic life with long lasting effects.

List of relevant R-phrases

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R11	Highly flammable.
R15	Contact with water liberates highly flammable gases.
R22	Harmful if swallowed.
R34	Causes burns.
R36	Irritating to eyes.
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.
R52/53	Harmful to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

Revision information:

Revision Changes:

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

Section 9: Flammability (solid, gas) information information was modified.

Section 14: Transportation classification information was modified.

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

Copyright information was modified.

Section 11: Acute Toxicity table information was modified.

Carcinogenicity Table information was modified.

Serious Eye Damage/Irritation Table information was modified.

Germ Cell Mutagenicity Table information was modified.

Skin Sensitisation Table information was modified.

Respiratory Sensitisation Table information was modified.

Reproductive Toxicity Table information was modified.

Skin Corrosion/Irritation Table information was modified.

Target Organs - Repeated Table information was modified.

Target Organs - Single Table information was modified.

Section 11: Health Effects - Ingestion information information was modified.

Section 5: Fire - Extinguishing media information information was modified.

Section 6: Accidental release clean-up information information was modified.

Section 8: Appropriate Engineering controls information information was modified.

Label: Graphic information was modified.

Section 8: Skin protection - protective clothing text information was added.

Section 12: Component ecotoxicity information information was added.

Section 12: Persistence and Degradability information information was added.

Section 12:Biocumulative potential information information was added.

Section 12: Component Ecotoxicity table Material column header information was added.

Section 12: Component Ecotoxicity table CAS No column header information was added.

Section 12: Component Ecotoxicity table Organism column header information was added.

Section 12: Component Ecotoxicity table Type column header information was added.

Section 12: Component Ecotoxicity table Exposure column header information was added.

Section 12: Component Ecotoxicity table End point column header information was added.

Section 12: Component Ecotoxicity table Result column header information was added.

Section 12: Persistence and degradability table Material column header information was added.

Section 12: Persistence and degradability table CAS No column header information was added.

Section 12: Persistence and degradability table Test Type column header information was added.

Section 12: Persistence and degradability table Duration column header information was added.

Section 12: Persistence and degradability table Test Result column header information was added.

Section 12: Persistence and degradability table Protocol column header information was added.

Section 12:Biocumulative potential table Material column header information was added.

Section 12:Biocumulative potential table CAS No column header information was added.

Section 12:Biocumulative potential table CAS No column header information was added.

Section 12:Biocumulative potential table Test Result column header information was added.

Section 12:Biocumulative potential table Protocol column header information was added.

Section 12:Biocumulative potential table Test Type column header information was added.

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.
Label: CLP Supplemental Hazard Statements information was added.
Label: CLP Supplemental Hazard Statements - Header information was added.
Label: CLP Supplemental Information - Header 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 12: Persistence and degradability table Study Type column header information was added.
Section 12: Biocumulative potential table Test Type column header information was added.
Section 9: Odour Threshold information was added.
Section 9: Solubility (non-water) information was added.
Section 09: Decomposition Temperature information was added.
Section 2: H phrase reference information was added.
Section 10: Hazardous decomposition products during combustion text information was added.
Section 9: Flammability (solid, gas) information information was added.
Section 12: Acute aquatic hazard information information was deleted.
Section 12: Chronic aquatic hazard heading information was deleted.
Section 12: Acute aquatic hazard heading information was deleted.
Section 12: Chronic aquatic hazard information information was deleted.
Prints No Data if Component ecotoxicity information is not present information was deleted.
Prints No Data if Persistence and Degradability information is not present information was deleted.
Prints No Data if Biocumulative potential information is not present information was deleted.
Section 8: mg/m³ key information was deleted.
Section 8: ppm key information was deleted.
Section 8: 8.1. Derived no effect level (DNEL) table heading information was deleted.
Section 8: 8.1. Predicted no effect concentrations (PNEC) table heading information was deleted.
Section 8: 8.1. Derived no effect level (DNEL) table ingredient column heading information was deleted.
Section 8: 8.1. Derived no effect level (DNEL) table population column heading information was deleted.
Section 8: 8.1. Derived no effect level (DNEL) table human exposure pattern column heading information was deleted.
Section 8: 8.1. Derived no effect level (DNEL) table DNEL column heading information was deleted.
Section 8: 8.1. Predicted no effect concentrations (PNEC) table ingredient column heading information was deleted.
Section 8: 8.1. Predicted no effect concentrations (PNEC) table compartment column heading information was deleted.
Section 8: 8.1. Predicted no effect concentrations (PNEC) table PNEC column heading information was deleted.
Section 8: Personal Protection - Skin/hand information information was deleted.
Section 8: 8.1. Derived no effect level (DNEL) table Degradation Product column heading information was deleted.
Section 8: 8.1. Predicted no effect concentrations (PNEC) table Degradation Product column heading 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:	1.00 (10/05/2011)		

This Safety Data Sheet has been prepared in accordance with the REACH Regulation (EC) 1907/2006 and its modifications.

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

3M TC-2707 Thermally Conductive Adhesive (Part B)

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

Identified uses

Adhesive

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

Irritant; Xi; R36/38

Sensitizing; R43

Dangerous for the environment; N; R51/53

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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

4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane

CAS Nbr

25068-38-6

% by Wt

40 - 70

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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SUPPLEMENTAL INFORMATION

Supplemental Hazard Statements:

EUH205	Contains epoxy constituents. May produce an allergic reaction.
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Dangerous substances(67/548/EEC)/preparations(1999/45/EC) directive

Symbol(s)

3M TC-2707 Thermally Conductive Adhesive (Part B)



Irritant



Dangerous
for the
environment

Contains:

4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane

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
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	25068-38-6	NLP 500-033-5	40 - 70	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)
Aluminium	7429-90-5	EINECS 231-072-3	40 - 70	F:R11-15 - Nota T (EU) Flam. Sol. 1, H228; Water-react. 2, H261 - Nota T (CLP)
Methyl methacrylate - butadiene - styrene polymer	25053-09-2		3 - 7	

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.

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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.

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 toxic, corrosivity or flammability hazard. 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. Clean up residue with detergent and water. 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

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

Store away from acids. Store away from oxidising agents.

7.3. Specific end use(s)

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

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Ingredient	CAS Nbr	Agency	Limit type	Additional comments
Aluminium	7429-90-5	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

8.2. Exposure controls

8.2.1. Engineering controls

Curing enclosures must be exhausted to outdoors or to a suitable emission control device. 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

Wear eye/face protection.

The following eye protection(s) are recommended: Safety glasses with side shields.

Indirect vented goggles.

Skin/hand protection

Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment.

Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials.

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

Respiratory protection

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In case of inadequate ventilation wear 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 mask P2 particulate respirator.

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

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

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid.
Appearance/Odour	grey, very mild odour.
Odour threshold	No data available.
pH	No data available.
Boiling point/boiling range	Not applicable.
Melting point	Not applicable.
Flammability (solid, gas)	Not applicable.
Explosive properties	Not classified
Oxidising properties	Not classified
Flash point	≥ 170 °C [Test Method: Estimated]
Autoignition temperature	No data available.
Flammable Limits(LEL)	No data available.
Flammable Limits(UEL)	No data available.
Vapour pressure	≤ 0.02 [@ 20 °C]
Relative density	1.62 [Ref Std: WATER=1]
Water solubility	Nil
Solubility- non-water	No data available.
Partition coefficient: n-octanol/water	No data available.
Evaporation rate	Not applicable.
Vapour density	Nil
Decomposition temperature	No data available.
Viscosity	105 Pa-s [@ 20 °C]
Density	1.62 g/ml

9.2. Other information

Volatile organic compounds (VOC)	2 g/l [Test Method: EPA method 24A]
Percent volatile	0.00 % weight
VOC less H ₂ O & exempt solvents	2 g/l [Test Method: EPA method 24A]

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 reaction (exotherm) with production of intense heat and smoke.

10.5 Incompatible materials

Strong acids.

Strong oxidising agents.

10.6 Hazardous decomposition products**Substance****Condition**

None known.

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labelling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1 Information on Toxicological effects**Signs and Symptoms of Exposure**

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

Inhalation

Respiratory tract irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. Vapours from heated material may cause irritation of the respiratory system: 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.

Ingestion

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

Toxicological Data**Acute Toxicity**

Name	Route	Species	Value
Overall product	Ingestion		Data not available or insufficient for classification; calculated ATE >5,000 mg/kg
Aluminium	Dermal		LD50 estimated to be > 5,000 mg/kg
Aluminium	Ingestion		LD50 estimated to be > 5,000 mg/kg

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Aluminium	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > .888 mg/l
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
Methyl methacrylate - butadiene - styrene polymer	Dermal	Rabbit	LD50 > 5,000 mg/kg
Methyl methacrylate - butadiene - styrene polymer	Ingestion	Rat	LD50 > 5,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Aluminium	Rabbit	No significant irritation
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Rabbit	Mild irritant
Methyl methacrylate - butadiene - styrene polymer		Minimal irritation

Serious Eye Damage/Irritation

Name	Species	Value
Aluminium	Rabbit	No significant irritation
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Rabbit	Moderate irritant
Methyl methacrylate - butadiene - styrene polymer		Mild irritant

Skin Sensitisation

Name	Species	Value
Aluminium	Guinea pig	Not sensitizing
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Human and animal	Sensitising
Methyl methacrylate - butadiene - styrene polymer		Data not available or insufficient for classification

Respiratory Sensitisation

Name	Species	Value
Aluminium	Human	Some positive data exist, but the data are not sufficient for classification
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
Methyl methacrylate - butadiene - styrene polymer		Data not available or insufficient for classification

Germ Cell Mutagenicity

Name	Route	Value
Aluminium	In Vitro	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
Methyl methacrylate - butadiene - styrene polymer		Data not available or insufficient for classification

Carcinogenicity

Name	Route	Species	Value
Aluminium			Data not available or insufficient for classification
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
Methyl methacrylate - butadiene - styrene polymer			Data not available or insufficient for classification

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

Name	Route	Value	Species	Test result	Exposure Duration
4,4'-Isopropylidenediphenol, oligomeric	Ingestion	Not toxic to female reproduction	Rat	NOAEL 750	2 generation

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reaction products with 1-chloro-2,3-epoxypropane				mg/kg/day	
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
Methyl methacrylate - butadiene - styrene polymer		Data not available or insufficient for classification			

Target Organ(s)**Specific Target Organ Toxicity - single exposure**

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Methyl methacrylate - butadiene - styrene polymer			Data not available or insufficient for classification			

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Aluminium	Inhalation	nervous system respiratory system	Some positive data exist, but the data are not sufficient for classification	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-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
Methyl methacrylate - butadiene - styrene polymer			Data not available or insufficient for classification			

Aspiration Hazard

Name	Value
Aluminium	Not an aspiration hazard
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Not an aspiration hazard
Methyl methacrylate - butadiene - styrene polymer	Not an aspiration hazard

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

SECTION 12: Ecological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. Additional information leading to material classification in Section 2 is available

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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
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
Aluminium	7429-90-5		Data not available or insufficient for classification			
Methyl methacrylate - butadiene - styrene polymer	25053-09-2		Data not available or insufficient for classification			

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Methyl methacrylate - butadiene - styrene polymer	25053-09-2	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	25068-38-6	Laboratory Biodegradation	28 days	BOD	0 % weight	OECD 301C - MITI test (I)

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reaction products with 1-chloro-2,3-epoxypropane						
Aluminium	7429-90-5	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
Methyl methacrylate - butadiene - styrene polymer	25053-09-2	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
Aluminium	7429-90-5	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

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**

Dispose of contents/ container in accordance with the local/regional/national/international regulations

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. Combustion products will include halogen acid (HCl/HF/HBr). Facility must be capable of handling halogenated materials. If no other disposal options are available, waste product that has been completely cured or polymerised may be placed in a landfill properly designed for industrial waste. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

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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 04 09* Waste adhesives and sealants containing organic solvents or other dangerous substances
- 20 01 27* Paint, inks, adhesives and resins containing dangerous substances

SECTION 14: Transportation information

ADR: UN3082 Environmentally hazardous substance, liquid, N.O.S. (bisphenol a- epichlorohydrin copolymer); 9; III; (E); M6

IATA: UN3082 Environmentally hazardous substance, liquid, N.O.S. (bisphenol a- epichlorohydrin copolymer); 9; III

IMDG: UN3082 Environmentally hazardous substance, liquid, N.O.S. (bisphenol a- epichlorohydrin copolymer); 9; III; EmS: F-A, S-F

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 material are in compliance with the provisions of Japan Chemical Substance Control Law. Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Philippines RA 6969 requirements. Certain restrictions may apply. Contact the selling division for additional information. The components of this product are in compliance with the new substance notification requirements of CEPA. The components of this product are in compliance with the chemical notification requirements of TSCA.

15.2. Chemical Safety Assessment

Not applicable

SECTION 16: Other information

List of relevant H statements

- | | |
|------|--|
| H228 | Flammable solid. |
| H261 | In contact with water releases flammable gas. |
| 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

- | | |
|--------|--|
| R11 | Highly flammable. |
| R15 | Contact with water liberates highly flammable gases. |
| 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: List of relevant R phrase information information was modified.
Section 3: Composition/ Information of ingredients table information was modified.
Section 9: Flammability (solid, gas) information information was modified.
Section 14: Transportation classification information was modified.
Section 16: Regulations - Inventories - EU ONLY information was modified.
Copyright information was modified.
Section 11: Acute Toxicity table information was modified.
Carcinogenicity Table information was modified.
Serious Eye Damage/Irritation Table information was modified.
Germ Cell Mutagenicity Table information was modified.
Skin Sensitisation Table information was modified.
Respiratory Sensitisation Table information was modified.
Reproductive Toxicity Table information was modified.
Skin Corrosion/Irritation Table information was modified.
Target Organs - Repeated Table information was modified.
Target Organs - Single Table information was modified.
Section 11: Health Effects - Ingestion information information was modified.
Section 5: Fire - Extinguishing media information information was modified.
Section 6: Accidental release clean-up information information was modified.
Label: Graphic information was modified.
Section 8: Skin protection - protective clothing text information was added.
Section 12: Component ecotoxicity information information was added.
Section 12: Persistence and Degradability information information was added.
Section 12:Biocumulative potential information information was added.
Section 12: Component Ecotoxicity table Material column header information was added.
Section 12: Component Ecotoxicity table CAS No column header information was added.
Section 12: Component Ecotoxicity table Organism column header information was added.
Section 12: Component Ecotoxicity table Type column header information was added.
Section 12: Component Ecotoxicity table Exposure column header information was added.
Section 12: Component Ecotoxicity table End point column header information was added.
Section 12: Component Ecotoxicity table Result column header information was added.
Section 12: Persistence and degradability table Material column header information was added.
Section 12: Persistence and degradability table CAS No column header information was added.
Section 12: Persistence and degradability table Test Type column header information was added.
Section 12: Persistence and degradability table Duration column header information was added.
Section 12: Persistence and degradability table Test Result column header information was added.
Section 12: Persistence and degradability table Protocol column header information was added.
Section 12:Biocumulative potential table Material column header information was added.
Section 12:Biocumulative potential table CAS No column header information was added.
Section 12:Biocumulative potential table CAS No column header information was added.
Section 12:Biocumulative potential table Test Result column header information was added.
Section 12:Biocumulative potential table Protocol column header information was added.
Section 12:Biocumulative potential table Test Type column header information was added.
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 Environmental Hazard Statements information was added.
Label: Graphic information was added.

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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.
Label: CLP Supplemental Hazard Statements information was added.
Label: CLP Supplemental Hazard Statements - Header information was added.
Label: CLP Supplemental Information - Header 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 12: Persistence and degradability table Study Type column header information was added.
Section 12: Biocumulative potential table Test Type column header information was added.
Section 9: Odour Threshold information was added.
Section 9: Solubility (non-water) information was added.
Section 09: Decomposition Temperature information was added.
Section 2: H phrase reference information was added.
Section 10: Hazardous decomposition products during combustion text information was added.
Section 9: Flammability (solid, gas) information information was added.
Section 12: Acute aquatic hazard information information was deleted.
Section 12: Chronic aquatic hazard heading information was deleted.
Section 12: Acute aquatic hazard heading information was deleted.
Section 12: Chronic aquatic hazard information information was deleted.
Prints No Data if Component ecotoxicity information is not present information was deleted.
Prints No Data if Persistence and Degradability information is not present information was deleted.
Prints No Data if Biocumulative potential information is not present information was deleted.
Section 8: mg/m³ key information was deleted.
Section 8: ppm key information was deleted.
Section 8: 8.1. Derived no effect level (DNEL) table heading information was deleted.
Section 8: 8.1. Predicted no effect concentrations (PNEC) table heading information was deleted.
Section 8: 8.1. Derived no effect level (DNEL) table ingredient column heading information was deleted.
Section 8: 8.1. Derived no effect level (DNEL) table population column heading information was deleted.
Section 8: 8.1. Derived no effect level (DNEL) table human exposure pattern column heading information was deleted.
Section 8: 8.1. Derived no effect level (DNEL) table DNEL column heading information was deleted.
Section 8: 8.1. Predicted no effect concentrations (PNEC) table ingredient column heading information was deleted.
Section 8: 8.1. Predicted no effect concentrations (PNEC) table compartment column heading information was deleted.
Section 8: 8.1. Predicted no effect concentrations (PNEC) table PNEC column heading information was deleted.
Section 8: Personal Protection - Skin/hand information information was deleted.
Section 8: 8.1. Derived no effect level (DNEL) table Degradation Product column heading information was deleted.
Section 8: 8.1. Predicted no effect concentrations (PNEC) table Degradation Product column heading 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

