



Safety Data Sheet

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Document group:	18-0246-1	Version number:	19.00
Revision date:	15/04/2021	Supersedes date:	26/07/2019
Transportation version number:	2.00 (07/10/2019)		

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 Scotch-Weld™ Urethane Adhesive DP620NS Black

Product Identification Numbers

62-2645-3535-2 62-2645-5031-0

7000046372 7100148737

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

Identified uses

Structural adhesive.

1.3. Details of the supplier of the safety data sheet

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:

18-0391-5, 18-0364-2

TRANSPORTATION INFORMATION

62-2645-3535-2, 62-2645-5031-0

ADR/RID: UN3267, CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S., LIMITED QUANTITY, (ISOPHORONE DIAMINE), 8., III, (E), ADR Classification Code: C7.

IMDG-CODE: UN3267, CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S., (ISOPHORONE DIAMINE), 8., III, IMDG-Code segregation code: 18- ALKALIS, LIMITED QUANTITY, EMS: FA,SB.

ICAO/IATA: UN3267, CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S., (ISOPHORONE DIAMINE), 8., III.

KIT LABEL

2.1. Classification of the substance or mixture

CLP REGULATION (EC) No 1272/2008

CLASSIFICATION:

Acute Toxicity, Category 3 - Acute Tox. 3; H331

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

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

Respiratory Sensitization, Category 1 - Resp. Sens. 1; H334

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

Carcinogenicity, Category 2 - Carc. 2; H351

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

Specific Target Organ Toxicity-Single Exposure, Category 3 - STOT SE 3; H335

For full text of H phrases, see Section 16.

2.2. Label elements

CLP REGULATION (EC) No 1272/2008

SIGNAL WORD

DANGER.

Symbols

GHS05 (Corrosion) | GHS06 (Skull and crossbones) | GHS08 (Health Hazard) |

Pictograms



Contains:

Cyclohex-1,4-ylenedimethanol; Dipotassium oxide; Disodium oxide; m-Xylene-.alpha.alpha'.-diamine; Triethoxy(3-isocyanatopropyl)silane; 3-aminomethyl-3,5,5-trimethylcyclohexylamine; 4,4'-Methylenediphenyl diisocyanate, oligomers

HAZARD STATEMENTS:

H331	Toxic if inhaled.
H314	Causes severe skin burns and eye damage.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317	May cause an allergic skin reaction.
H351	Suspected of causing cancer.
H335	May cause respiratory irritation.
H373	May cause damage to organs through prolonged or repeated exposure: respiratory system

PRECAUTIONARY STATEMENTS

Prevention:

P260A Do not breathe vapours.
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 or shower.
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
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.
P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTRE or doctor/physician.

Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

For containers not exceeding 125 ml the following Hazard and Precautionary statements may be used:

<=125 ml Hazard statements

H331 Toxic if inhaled.
H314 Causes severe skin burns and eye damage.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317 May cause an allergic skin reaction.
H351 Suspected of causing cancer.

<=125 ml Precautionary statements

Prevention:

P260A Do not breathe vapours.
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 or shower.
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
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.
P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTRE or doctor/physician.

Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

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

Revision information:

Section 2: <125ml Hazard - Health information was modified.
Section 2: <125ml Precautionary - Response information was modified.
Section 2: <125ml Precautionary - Storage information was added.
Label: CLP Classification information was modified.
Label: CLP Precautionary - Response information was modified.
Label: CLP Precautionary - Storage information was added.
Label: Graphic information was modified.



Safety Data Sheet

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Document group:	18-0364-2	Version number:	16.00
Revision date:	15/04/2021	Supersedes date:	26/07/2019

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 Scotch-Weld™ Urethane Adhesive DP620NS Black and Urethane Adhesive 620NS Black, Part A

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

Identified uses

Structural adhesive.

1.3. Details of the supplier of the safety data sheet

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

Formerly known as DYNAMix™ Sheet Metal Bonding Adhesive 6188-1.

SECTION 2: Hazard identification

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

The health and environmental classifications of this material have been derived using the calculation method, except in cases where test data are available or the physical form impacts classification. Classification(s) based on test data or physical form are noted below, if applicable.

CLASSIFICATION:

Acute Toxicity, Category 3 - Acute Tox. 3; H331
Skin Corrosion/Irritation, Category 2 - Skin Irrit. 2; H315
Serious Eye Damage/Eye Irritation, Category 2 - Eye Irrit. 2; H319
Respiratory Sensitization, Category 1 - Resp. Sens. 1; H334

Skin Sensitization, Category 1 - Skin Sens. 1; H317
 Carcinogenicity, Category 2 - Carc. 2; H351
 Specific Target Organ Toxicity-Repeated Exposure, Category 2 - STOT RE 2; H373
 Specific Target Organ Toxicity-Single Exposure, Category 3 - STOT SE 3; H335

For full text of H phrases, see Section 16.

2.2. Label elements

CLP REGULATION (EC) No 1272/2008

SIGNAL WORD

DANGER.

Symbols

GHS06 (Skull and crossbones) | GHS08 (Health Hazard) |

Pictograms



Ingredients:

Ingredient	CAS Nbr	EC No.	% by Wt
4,4'-Methylenediphenyl diisocyanate, oligomers		500-040-3	45 - 100
Triethoxy(3-isocyanatopropyl)silane	24801-88-5	246-467-6	<= 1

HAZARD STATEMENTS:

H331	Toxic if inhaled.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317	May cause an allergic skin reaction.
H351	Suspected of causing cancer.
H335	May cause respiratory irritation.
H373	May cause damage to organs through prolonged or repeated exposure: respiratory system.

PRECAUTIONARY STATEMENTS

Prevention:

P261A	Avoid breathing vapours.
P280K	Wear protective gloves and respiratory protection.

Response:

P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P342 + P311	If experiencing respiratory symptoms: Call a POISON CENTRE or doctor/physician.

Storage:

P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
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For containers not exceeding 125 ml the following Hazard and Precautionary statements may be used:

<=125 ml Hazard statements

H331	Toxic if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317	May cause an allergic skin reaction.
H351	Suspected of causing cancer.

<=125 ml Precautionary statements

Prevention:

P261A	Avoid breathing vapours.
P280K	Wear protective gloves and respiratory protection.

Response:

P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P342 + P311	If experiencing respiratory symptoms: Call a POISON CENTRE or doctor/physician.

Storage:

P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
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Contains 33% of components with unknown hazards to the aquatic environment.

**Information required per Regulation (EU) 2020/1149 as regards diisocyanates:
As from 24 August 2023 adequate training is required before industrial or professional use.**

Notes on labelling

Polymers were excluded from the acute toxicity inhalation calculation due to their extremely low vapour pressure, the extremely low vapour pressure of this material, and the fact that dust/mist exposure is not expected during normal use of this product.

2.3. Other hazards

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

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Ingredient	Identifier(s)	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
4,4'-Methylenediphenyl diisocyanate, oligomers	(EC-No.) 500-040-3	45 - 100	Carc. 2, H351 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317 STOT SE 3, H335 STOT RE 2, H373
Castor oil, polymer with 1,1'-methylenebis[4-isocyanatobenzene]	(CAS-No.) 68424-09-9	15 - 40	Substance with a national occupational exposure limit

Triethoxy(3-isocyanatopropyl)silane	(CAS-No.) 24801-88-5 (EC-No.) 246-467-6	<= 1	Acute Tox. 1, H330 Acute Tox. 4, H312 Acute Tox. 4, H302 Skin Corr. 1B, H314 Resp. Sens. 1, H334 Skin Sens. 1, H317
Carbon black	(CAS-No.) 1333-86-4 (EC-No.) 215-609-9 (REACH-No.) 01-2119384822-32	<= 0.5	Substance with a national occupational exposure limit
Chromium	(CAS-No.) 7440-47-3 (EC-No.) 231-157-5	< 0.02	Substance with a Union workplace exposure limit

Please see section 16 for the full text of any H statements referred to in this section

Specific Concentration Limits

Ingredient	Identifier(s)	Specific Concentration Limits
4,4'-Methylenediphenyl diisocyanate, oligomers	(EC-No.) 500-040-3	(C >= 5%) Skin Irrit. 2, H315 (C >= 5%) Eye Irrit. 2, H319 (C >= 0.1%) Resp. Sens. 1, H334 (C >= 5%) STOT SE 3, H335

For information on ingredient occupational exposure limits or PBT or vPvB status, see sections 8 and 12 of this SDS

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation

Remove person to fresh air. If you feel unwell, get medical attention.

Skin contact

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

Eye contact

Immediately flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. Get medical attention.

If swallowed

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

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

The most important symptoms and effects based on the CLP classification include:

Toxic if inhaled. Irritating to the respiratory tract (coughing, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain). Allergic respiratory reaction (difficulty breathing, wheezing, cough, and tightness of chest). Irritation to the skin (localized redness, swelling, itching, and dryness). Allergic skin reaction (redness, swelling, blistering, and itching). Serious irritation to the eyes (significant redness, swelling, pain, tearing, and impaired vision). Target organ effects. See Section 11 for additional details.

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

Not applicable

SECTION 5: Fire-fighting measures

5.1. Extinguishing media

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

5.2. Special hazards arising from the substance or mixture

None inherent in this product.

Hazardous Decomposition or By-Products

<u>Substance</u>	<u>Condition</u>
Carbon monoxide	During combustion.
Carbon dioxide.	During combustion.
Oxides of Chromium	During combustion.
Hydrogen cyanide.	During combustion.
Oxides of nitrogen.	During combustion.
Toxic vapour, gas, particulate.	During combustion.

5.3. Advice for fire-fighters

Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

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. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions

Avoid release to the environment. For larger spills, cover drains and build dykes to prevent entry into sewer systems or bodies of water.

6.3. Methods and material for containment and cleaning up

Contain spill. Pour isocyanate decontaminant solution (90% water, 8% concentrated ammonia, 2% detergent) on spill and allow to react for 10 minutes. Or pour water on spill and allow to react for more than 30 minutes. Cover with absorbent material. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible. Place in a container approved for transportation by appropriate authorities, but do not seal the container for 48 hours to avoid pressure build-up. Clean up residue with an appropriate solvent selected by a qualified and authorised person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and Safety Data Sheet. Dispose of collected material as soon as possible.

6.4. Reference to other sections

Refer to Section 8 and Section 13 for more information

SECTION 7: Handling and storage

7.1. Precautions for safe handling

For industrial/occupational use only. Not for consumer sale or use. 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.

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.

7.3. Specific end use(s)

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

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

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

Ingredient	CAS Nbr	Agency	Limit type	Additional comments
Carbon black	1333-86-4	UK HSC	TWA: 3.5 mg/m ³ ; STEL: 7 mg/m ³	
Free isocyanates	24801-88-5	UK HSC	TWA(as NCO):0.02 mg/m ³ ;STEL(as NCO):0.07 mg/m ³	Respiratory Sensitizer
Free isocyanates	68424-09-9	UK HSC	TWA(as NCO):0.02 mg/m ³ ;STEL(as NCO):0.07 mg/m ³	Respiratory Sensitizer
Chromium	7440-47-3	UK HSC	TWA: 0.5 mg/m ³	

UK HSC : UK Health and Safety Commission

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

Biological limit values

Ingredient	CAS Nbr	Agency	Determinant	Biological Specimen	Sampling Time	Value	Additional comments
Free isocyanates	24801-88-5	UK EH40 BMGVs	Isocyanate-derived diamine	Creatinine in urine	EPE	1 umol/mol	
Free isocyanates	68424-09-9	UK EH40 BMGVs	Isocyanate-derived diamine	Creatinine in urine	EPE	1 umol/mol	
Chromium	7440-47-3	UK EH40 BMGVs	Chromium	Creatinine in urine	EOS	10 umol/mol	

UK EH40 BMGVs : UK. EH40 Biological Monitoring Guidance Values (BMGVs)

EOS: End of shift.

EPE: At the end of the period of exposure.

Recommended monitoring procedures: Information on recommended monitoring procedures can be obtained from UK HSC

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.

Applicable Norms/Standards

Use eye protection conforming to EN 166

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. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity.

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

Material	Thickness (mm)	Breakthrough Time
Polymer laminate	No data available	No data available

Applicable Norms/Standards

Use gloves tested to EN 374

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.

Applicable Norms/Standards

Use a respirator conforming to EN 140 or EN 136: filter types A & P

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical state	Liquid.
Specific Physical Form:	Viscous.
Colour	Black
Odor	Low Odor
Odour threshold	No data available.
Melting point/freezing point	No data available.
Boiling point/boiling range	>=204.4 °C
Flammability (solid, gas)	Not applicable.
Flammable Limits(LEL)	Not applicable.
Flammable Limits(UEL)	Not applicable.
Flash point	>=143.3 °C [Test Method: Tagliabue closed cup]
Autoignition temperature	Not applicable.
Decomposition temperature	No data available.
pH	substance/mixture is non-soluble (in water)
Kinematic Viscosity	2,702.7027027027 mm ² /sec
Water solubility	Negligible
Solubility- non-water	No data available.

Partition coefficient: n-octanol/water	No data available.
Vapour pressure	≤0 Pa [@ 20 °C]
Density	1.11 g/ml
Relative density	1.11 [Ref Std:WATER=1]
Relative Vapor Density	≥1 [Ref Std:AIR=1]

9.2. Other information

9.2.2 Other safety characteristics

EU Volatile Organic Compounds	No data available.
Evaporation rate	≤1 [Details:Gels with exposure to humidity.]
Molecular weight	No data available.

SECTION 10: Stability and reactivity

10.1 Reactivity

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

10.2 Chemical stability

Stable.

10.3 Possibility of hazardous reactions

Hazardous polymerisation will not occur.

10.4 Conditions to avoid

None known.

10.5 Incompatible materials

Water
Strong acids.
Strong bases.

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 agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 11 are based on UN GHS calculation rules and classifications derived from internal hazard assessments.

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Signs and Symptoms of Exposure

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

Inhalation

May be harmful if inhaled. Respiratory tract irritation: Signs/symptoms may include cough, sneezing, nasal discharge,

headache, hoarseness, and nose and throat pain. Allergic respiratory reaction: Signs/symptoms may include difficulty breathing, wheezing, cough, and tightness of chest. May cause additional health effects (see below).

Skin contact

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

Eye contact

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

Ingestion

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

Additional Health Effects:

Prolonged or repeated exposure may cause target organ effects:

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

Additional information:

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

Toxicological Data

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

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE >5,000 mg/kg
Overall product	Inhalation-Vapour(4 hr)		No data available; calculated ATE20 - 50 mg/l
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
4,4'-Methylenediphenyl diisocyanate, oligomers	Dermal	Rabbit	LD50 > 5,000 mg/kg
4,4'-Methylenediphenyl diisocyanate, oligomers	Inhalation-Dust/Mist (4 hours)	Rat	LC50 0.368 mg/l
4,4'-Methylenediphenyl diisocyanate, oligomers	Ingestion	Rat	LD50 31,600 mg/kg
Triethoxy(3-isocyanatopropyl)silane	Dermal	Rabbit	LD50 1,259 mg/kg
Triethoxy(3-isocyanatopropyl)silane	Inhalation-Vapour (4 hours)	Rat	LC50 0.36 mg/l
Triethoxy(3-isocyanatopropyl)silane	Ingestion	Rat	LD50 706 mg/kg
Carbon black	Dermal	Rabbit	LD50 > 3,000 mg/kg
Carbon black	Ingestion	Rat	LD50 > 8,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
4,4'-Methylenediphenyl diisocyanate, oligomers	official classification	Irritant
Triethoxy(3-isocyanatopropyl)silane	Rabbit	Corrosive
Carbon black	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
4,4'-Methylenediphenyl diisocyanate, oligomers	official classification	Severe irritant
Triethoxy(3-isocyanatopropyl)silane	Rabbit	Corrosive
Carbon black	Rabbit	No significant irritation

Skin Sensitisation

Name	Species	Value
4,4'-Methylenediphenyl diisocyanate, oligomers	official classification	Sensitising
Triethoxy(3-isocyanatopropyl)silane	similar compounds	Sensitising

Respiratory Sensitisation

Name	Species	Value
4,4'-Methylenediphenyl diisocyanate, oligomers	Human	Sensitising
Triethoxy(3-isocyanatopropyl)silane	similar compounds	Sensitising

Germ Cell Mutagenicity

Name	Route	Value
4,4'-Methylenediphenyl diisocyanate, oligomers	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

Carcinogenicity

Name	Route	Species	Value
4,4'-Methylenediphenyl diisocyanate, oligomers	Inhalation	Rat	Some positive data exist, but the data are not sufficient for classification
Carbon black	Dermal	Mouse	Not carcinogenic
Carbon black	Ingestion	Mouse	Not carcinogenic
Carbon black	Inhalation	Rat	Carcinogenic.

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
4,4'-Methylenediphenyl diisocyanate, oligomers	Inhalation	Not classified for development	Rat	NOAEL 0.004 mg/l	during organogenesis

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
4,4'-Methylenediphenyl diisocyanate, oligomers	Inhalation	respiratory irritation	May cause respiratory irritation	official classification	NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

3M Scotch-Weld™ Urethane Adhesive DP620NS Black and Urethane Adhesive 620NS Black, Part A

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
4,4'-Methylenediphenyl diisocyanate, oligomers	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0.004 mg/l	13 weeks
Carbon black	Inhalation	pneumoconiosis	Not classified	Human	NOAEL Not available	occupational exposure

Aspiration Hazard

For the component/components, either no data is currently available or the data is not sufficient for classification.

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.

11.2. Information on other hazards

This material does not contain any substances that are assessed to be an endocrine disruptor for human health.

SECTION 12: Ecological information

The information below may not agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 12 are based on UN GHS calculation rules and classifications derived from 3M assessments.

12.1. Toxicity

No product test data available.

Material	CAS #	Organism	Type	Exposure	Test endpoint	Test result
4,4'-Methylenediphenyl diisocyanate, oligomers	500-040-3	Water flea	Estimated	24 hours	EC50	>100 mg/l
Castor oil, polymer with 1,1'-methylenebis[4-isocyanatobenzene]	68424-09-9		Data not available or insufficient for classification			NA
Triethoxy(3-isocyanatopropyl)silane	24801-88-5	Green algae	Estimated	72 hours	EC50	>1,000 mg/l
Triethoxy(3-isocyanatopropyl)silane	24801-88-5	Water flea	Estimated	48 hours	EC50	331 mg/l
Triethoxy(3-isocyanatopropyl)silane	24801-88-5	Zebra Fish	Estimated	96 hours	LC50	>934 mg/l
Triethoxy(3-isocyanatopropyl)silane	24801-88-5	Activated sludge	Experimental	3 hours	NOEC	10 mg/l
Triethoxy(3-isocyanatopropyl)silane	24801-88-5	Green algae	Estimated	72 hours	NOEC	1.3 mg/l
Triethoxy(3-isocyanatopropyl)silane	24801-88-5	Water flea	Estimated	21 days	NOEC	>=100 mg/l
Carbon black	1333-86-4	Activated sludge	Experimental	3 hours	EC50	>=100 mg/l
Carbon black	1333-86-4		Data not available or insufficient for classification			N/A
Chromium	7440-47-3		Data not available or insufficient for classification			n/a

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
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3M Scotch-Weld™ Urethane Adhesive DP620NS Black and Urethane Adhesive 620NS Black, Part A

4,4'-Methylenediphenyl diisocyanate, oligomers	500-040-3	Estimated Hydrolysis		Hydrolytic half-life	<2 hours (t 1/2)	Non-standard method
4,4'-Methylenediphenyl diisocyanate, oligomers	500-040-3	Estimated Biodegradation	28 days	BOD	0 % weight	OECD 301C - MITI test (I)
Castor oil, polymer with 1,1'-methylenebis[4-isocyanatobenzene]	68424-09-9	Data not available - insufficient			NA	
Triethoxy(3-isocyanatopropyl)silane	24801-88-5	Estimated Hydrolysis		Hydrolytic half-life	8.5 hours (t 1/2)	Non-standard method
Carbon black	1333-86-4	Data not available - insufficient			N/A	
Chromium	7440-47-3	Data not available - insufficient			N/A	

12.3 : Bioaccumulative potential

Material	Cas No.	Test type	Duration	Study Type	Test result	Protocol
4,4'-Methylenediphenyl diisocyanate, oligomers	500-040-3	Estimated BCF-Carp	28 days	Bioaccumulation factor	200	Non-standard method
Castor oil, polymer with 1,1'-methylenebis[4-isocyanatobenzene]	68424-09-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Triethoxy(3-isocyanatopropyl)silane	24801-88-5	Estimated BCF-Carp	56 days	Bioaccumulation factor	<3.4	OECD 305E - Bioaccumulation flow-through fish test
Carbon black	1333-86-4	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Chromium	7440-47-3	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

12.4. Mobility in soil

Material	Cas No.	Test type	Study Type	Test result	Protocol
Triethoxy(3-isocyanatopropyl)silane	24801-88-5	Estimated Mobility in Soil	Koc	0.2 l/kg	Episuite™

12.5. Results of the PBT and vPvB assessment

This material does not contain any substances that are assessed to be a PBT or vPvB

12.6. Endocrine disrupting properties

This material does not contain any substances that are assessed to be an endocrine disruptor for environmental effects

12.7. 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 waste product in a permitted industrial waste 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 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

Not hazardous for transportation.

	Ground Transport (ADR)	Air Transport (IATA)	Marine Transport (IMDG)
14.1 UN number	No data available.	No Data Available	No Data Available
14.2 UN proper shipping name	No data available.	No Data Available	No Data Available
14.3 Transport hazard class(es)	No data available.	No Data Available	No Data Available
14.4 Packing group	No data available.	No Data Available	No Data Available
14.5 Environmental hazards	No data available.	No Data Available	No Data Available
14.6 Special precautions for user	Please refer to the other sections of the SDS for further information.	Please refer to the other sections of the SDS for further information.	Please refer to the other sections of the SDS for further information.
14.7 Transport in bulk according to Annex II of Marpol 73/78 and IBC Code	No data available.	No Data Available	No Data Available
Control Temperature	No data available.	No Data Available	No Data Available
Emergency Temperature	No data available.	No Data Available	No Data Available
ADR Tunnel Code	No data available.	Not Applicable	No Data Available
ADR Classification Code	No data available.	No Data Available	No Data Available
ADR Transport Category	No data available.	No Data Available	No Data Available

ADR Multiplier	No data available.	No Data Available	No Data Available
IMDG Segregation Code	No data available.	No Data Available	No Data Available
Transport not Permitted	No data available.	No Data Available	No Data Available

Please contact the address or phone number listed on the first page of the SDS for additional information on the transport/shipment of the material by rail (RID) or inland waterways (ADN).

SECTION 15: Regulatory information

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

Carcinogenicity

<u>Ingredient</u>	<u>CAS Nbr</u>	<u>Classification</u>	<u>Regulation</u>
4,4'-Methylenediphenyl diisocyanate, oligomers	500-040-3	Carc. 2	Vendor classified according to Regulation (EC) No 1272/2008
Carbon black	1333-86-4	Grp. 2B: Possible human carc.	International Agency for Research on Cancer
Chromium	7440-47-3	Gr. 3: Not classifiable	International Agency for Research on Cancer

15.2. Chemical Safety Assessment

A chemical safety assessment has not been carried out for this mixture. Chemical safety assessments for the contained substances may have been carried out by the registrants of the substances in accordance with Regulation (EC) No 1907/2006, as amended.

SECTION 16: Other information

List of relevant H statements

H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure: respiratory system.

Revision information:

EU Section 09: pH information information was added.
Section 2: <125ml Hazard - Health information was modified.
Section 2: <125ml Precautionary - Prevention information was modified.
Section 2: <125ml Precautionary - Response information was modified.
Section 2: <125ml Precautionary - Storage information was added.
CLP: Ingredient table information was modified.
Label: CLP Classification information was modified.
Label: CLP Percent Unknown information was modified.
Label: CLP Precautionary - Prevention information was modified.
Label: CLP Precautionary - Response information was modified.
Label: CLP Precautionary - Storage information was added.
Label: CLP Target Organ Hazard Statement information was modified.
Label: Graphic information was modified.
Section 02: Regulation (EU) 2020/1149 Statement information was added.
Section 03: Composition table % Column heading information was added.
Section 3: Composition/ Information of ingredients table information was modified.
Section 03: SCL table information was added.
Section 03: Substance not applicable information was added.
Section 04: First Aid - Symptoms and Effects (CLP) information was added.
Section 04: Information on toxicological effects information was modified.
Section 5: Hazardous combustion products table information was modified.
Section 8: BLV table information was modified.
Section 8: Occupational exposure limit table information was modified.
Section 09: Color information was added.
Section 9: Evaporation Rate information information was deleted.
Section 9: Explosive properties information information was deleted.
Section 09: Kinematic Viscosity information information was added.
Section 9: Melting point information information was modified.
Section 09: Odor information was added.
Sections 3 and 9: Odour, colour, grade information information was deleted.
Section 9: Oxidising properties information information was deleted.
Section 9: pH information information was deleted.
Section 9: Property description for optional properties information was modified.
Section 9: Vapour density value information was added.
Section 9: Vapour density value information was deleted.
Section 9: Viscosity information information was deleted.
Section 11: Classification disclaimer information was modified.
Section 11: No endocrine disruptor information available warning information was added.
Section 12: 12.6. Endocrine Disrupting Properties information was added.
Section 12: 12.7. Other adverse effects information was modified.
Section 12: Component ecotoxicity information information was modified.
Section 12: Contact manufacturer for more detail. information was deleted.
Section 12: Mobility in soil information information was added.
Section 12: No endocrine disruptor information available warning information was added.
Section 12: Persistence and Degradability information information was modified.
Section 12: Biocumulative potential information information was modified.
Section 14 Classification Code – Main Heading information was added.
Section 14 Classification Code – Regulation Data information was added.
Section 14 Control Temperature – Main Heading information was added.
Section 14 Control Temperature – Regulation Data information was added.
Section 14 Disclaimer Information information was added.
Section 14 Emergency Temperature – Main Heading information was added.
Section 14 Emergency Temperature – Regulation Data information was added.
Section 14 Hazard Class + Sub Risk – Main Heading information was added.

Section 14 Hazard Class + Sub Risk – Regulation Data information was added.
Section 14 Hazardous/Not Hazardous for Transportation information was added.
Section 14 Multiplier – Main Heading information was added.
Section 14 Multiplier – Regulation Data information was added.
Section 14 Other Dangerous Goods – Main Heading information was added.
Section 14 Other Dangerous Goods – Regulation Data information was added.
Section 14 Packing Group – Main Heading information was added.
Section 14 Packing Group – Regulation Data information was added.
Section 14 Proper Shipping Name information was added.
Section 14 Regulations – Main Headings information was added.
Section 14 Segregation – Regulation Data information was added.
Section 14 Segregation Code – Main Heading information was added.
Section 14 Special Precautions – Main Heading information was added.
Section 14 Special Precautions – Regulation Data information was added.
Section 14 Transport Category – Main Heading information was added.
Section 14 Transport Category – Regulation Data information was added.
Section 14 Transport in bulk – Regulation Data information was added.
Section 14 Transport in bulk according to Annex II of Marpol and the IBC Code – Main Heading information was added.
Section 14 Transport Not Permitted – Main Heading information was added.
Section 14 Transport Not Permitted – Regulation Data information was added.
Section 14 Tunnel Code – Main Heading information was added.
Section 14 Tunnel Code – Regulation Data information was added.
Section 14 UN Number Column data information was added.
Section 14 UN Number information was added.
Section 14: Transportation classification information was deleted.
Two-column table displaying the unique list of H Codes and statements (std phrases) for all components of the given material.
information was modified.
Section 16: UK disclaimer information was deleted.

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



Safety Data Sheet

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Document group:	18-0391-5	Version number:	14.00
Revision date:	15/04/2021	Supersedes date:	03/07/2019

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 Scotch-Weld™ Urethane Adhesive DP620NS Black and Urethane Adhesive 620NS Black, Part B

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

Identified uses

Structural adhesive.

1.3. Details of the supplier of the safety data sheet

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

Formerly known as DYNAMix™ Sheet Metal Bonding Adhesive 6188-1.

SECTION 2: Hazard identification

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

The health and environmental classifications of this material have been derived using the calculation method, except in cases where test data are available or the physical form impacts classification. Classification(s) based on test data or physical form are noted below, if applicable.

CLASSIFICATION:

Skin Corrosion/Irritation, Category 1B - Skin Corr. 1B; H314
Serious Eye Damage/Eye Irritation, Category 1 - Eye Dam. 1; H318
Skin Sensitization, Category 1A - Skin Sens. 1A; H317

For full text of H phrases, see Section 16.

2.2. Label elements

CLP REGULATION (EC) No 1272/2008

SIGNAL WORD

DANGER.

Symbols

GHS05 (Corrosion) |GHS07 (Exclamation mark) |

Pictograms



Ingredients:

Ingredient	CAS Nbr	EC No.	% by Wt
Cyclohex-1,4-ylenedimethanol	105-08-8	203-268-9	1 - 10
3-aminomethyl-3,5,5-trimethylcyclohexylamine	2855-13-2	220-666-8	0.1 - 5
Potassium Oxide	12136-45-7	235-227-6	0.1 - 5
Disodium oxide	1313-59-3	215-208-9	<= 1.5
m-Xylene-.alpha.alpha'.-diamine	1477-55-0	216-032-5	<= 0.5

HAZARD STATEMENTS:

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

PRECAUTIONARY STATEMENTS

Prevention:

P260A Do not breathe vapours.
 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 or 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.

For containers not exceeding 125 ml the following Hazard and Precautionary statements may be used:

<=125 ml Hazard statements

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

<=125 ml Precautionary statements

Prevention:

P260A Do not breathe vapours.

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 or 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.

2% of the mixture consists of components of unknown acute oral toxicity.
 3% of the mixture consists of components of unknown acute dermal toxicity.

Contains 41% of components with unknown hazards to the aquatic environment.

2.3. Other hazards

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

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Ingredient	Identifier(s)	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Glycerol poly(oxyethylene, oxypropylene) ether	(CAS-No.) 9082-00-2	20 - 50	Substance not classified as hazardous
Propylidynetrimethanol, propoxylated	(CAS-No.) 25723-16-4 (EC-No.) 500-041-9	15 - 40	Substance not classified as hazardous
Cyclohex-1,4-ylenedimethanol	(CAS-No.) 105-08-8 (EC-No.) 203-268-9 (REACH-No.) 01-2119448337-34	1 - 10	Eye Dam. 1, H318
Silicon dioxide	(CAS-No.) 7631-86-9 (EC-No.) 231-545-4	1 - 10	Substance with a national occupational exposure limit
Potassium Oxide	(CAS-No.) 12136-45-7 (EC-No.) 235-227-6	0.1 - 5	EUH014 Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335
3-aminomethyl-3,5,5-trimethylcyclohexylamine	(CAS-No.) 2855-13-2 (EC-No.) 220-666-8	0.1 - 5	Acute Tox. 4, H312 Acute Tox. 4, H302 Skin Corr. 1B, H314 Skin Sens. 1A, H317 Aquatic Chronic 3, H412
Calcium Oxide	(CAS-No.) 1305-78-8 (EC-No.) 215-138-9	0.1 - 5	EUH071 Skin Corr. 1C, H314 Eye Dam. 1, H318
Aluminium oxide	(CAS-No.) 1344-28-1 (EC-No.) 215-691-6	0.1 - 5	Substance with a national occupational exposure limit

	(REACH-No.) 01-2119529248-35		
Disodium oxide	(CAS-No.) 1313-59-3 (EC-No.) 215-208-9	<= 1.5	EUH014 Acute Tox. 3, H301 Skin Corr. 1B, H314 STOT SE 3, H335
m-Xylene-.alpha.alpha'.-diamine	(CAS-No.) 1477-55-0 (EC-No.) 216-032-5	<= 0.5	Acute Tox. 4, H332 Acute Tox. 4, H302 Skin Corr. 1B, H314 Skin Sens. 1, H317 Aquatic Chronic 3, H412

Please see section 16 for the full text of any H statements referred to in this section

Specific Concentration Limits

Ingredient	Identifier(s)	Specific Concentration Limits
Calcium Oxide	(CAS-No.) 1305-78-8 (EC-No.) 215-138-9	(C >= 50%) EUH071 (C >= 50%) Skin Corr. 1C, H314 (10% =< C < 50%) Skin Irrit. 2, H315 (C >= 3%) Eye Dam. 1, H318 (1% =< C < 3%) Eye Irrit. 2, H319 (20% =< C < 50%) STOT SE 3, H335

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

The most important symptoms and effects based on the CLP classification include:

Skin burns (localized redness, swelling, itching, intense pain, blistering, and tissue destruction). Allergic skin reaction (redness, swelling, blistering, and itching). Serious damage to the eyes (corneal cloudiness, severe pain, tearing, ulcerations, and significantly impaired or loss of vision).

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

Not applicable

SECTION 5: Fire-fighting measures

5.1. Extinguishing media

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

5.2. Special hazards arising from the substance or mixture

None inherent in this product.

Hazardous Decomposition or By-Products

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

5.3. Advice for fire-fighters

Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

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. 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

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.

7.3. Specific end use(s)

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

SECTION 8: Exposure controls/personal protection**8.1 Control parameters****Occupational exposure limits**

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

Ingredient	CAS Nbr	Agency	Limit type	Additional comments
Calcium Oxide	1305-78-8	UK HSC	TWA(respirable fraction):1 mg/m ³ ;TWA:2 mg/m ³ ;STEL(respirable fraction):4 mg/m ³	
Aluminium oxide	1344-28-1	UK HSC	TWA(as respirable dust):4 mg/m ³ ;TWA(as inhalable dust):10 mg/m ³	
Silicon dioxide	7631-86-9	UK HSC	TWA(as respirable dust):2.4 mg/m ³ ;TWA(as inhalable dust):6 mg/m ³	

UK HSC : 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.

Recommended monitoring procedures:Information on recommended monitoring procedures can be obtained from UK HSC

8.2. Exposure controls**8.2.1. Engineering controls**

Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapours/spray. If ventilation is not adequate, use respiratory protection equipment.

8.2.2. Personal protective equipment (PPE)**Eye/face protection**

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:

Full face shield.

Indirect vented goggles.

Applicable Norms/Standards

Use eye/face protection conforming to EN 166

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. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity.

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

Material	Thickness (mm)	Breakthrough Time
Polymer laminate	No data available	No data available

Applicable Norms/Standards

Use gloves tested to EN 374

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 organic vapours and particulates

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

Applicable Norms/Standards

Use a respirator conforming to EN 140 or EN 136: filter types A & P

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid.
Specific Physical Form:	Viscous.
Colour	Milky White
Odor	Slight Ammoniacal
Odour threshold	No data available.
Melting point/freezing point	No data available.
Boiling point/boiling range	>=198.9 °C
Flammability (solid, gas)	Not applicable.
Flammable Limits(LEL)	Not applicable.
Flammable Limits(UEL)	Not applicable.
Flash point	>=143.3 °C [Test Method: Tagliabue closed cup]
Autoignition temperature	Not applicable.
Decomposition temperature	No data available.
pH	substance/mixture is non-soluble (in water)
Kinematic Viscosity	4,269.44971537002 mm ² /sec
Water solubility	Negligible
Solubility- non-water	No data available.
Partition coefficient: n-octanol/water	No data available.
Vapour pressure	Not applicable.
Density	1.054 g/ml
Relative density	1 - 1.2 [Ref Std: WATER=1]
Relative Vapor Density	>=1 [Ref Std: AIR=1]

9.2. Other information

9.2.2 Other safety characteristics

EU Volatile Organic Compounds	No data available.
Evaporation rate	<=1 [Ref Std: WATER=1]
Molecular weight	No data available.

SECTION 10: Stability and reactivity

10.1 Reactivity

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

10.2 Chemical stability

Stable.

10.3 Possibility of hazardous reactions

Hazardous polymerisation will not occur.

10.4 Conditions to avoid

None known.

10.5 Incompatible materials

Strong acids.

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 agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 11 are based on UN GHS calculation rules and classifications derived from internal hazard assessments.

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Signs and Symptoms of Exposure

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

Inhalation

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

Skin contact

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

May be 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.

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	Ingestion		No data available; calculated ATE2,000 - 5,000 mg/kg
Glycerol poly(oxyethylene, oxypropylene) ether	Dermal	Rabbit	LD50 > 5,000 mg/kg
Glycerol poly(oxyethylene, oxypropylene) ether	Ingestion	Rat	LD50 > 10,000 mg/kg
Propylidyntrimethanol, propoxylated	Dermal	Rat	LD50 > 2,000 mg/kg
Propylidyntrimethanol, propoxylated	Ingestion	Rat	LD50 > 2,500 mg/kg
Cyclohex-1,4-ylenedimethanol	Dermal	Rat	LD50 > 2,000 mg/kg
Cyclohex-1,4-ylenedimethanol	Ingestion	Rat	LD50 > 2,000 mg/kg
Silicon dioxide	Dermal	Rabbit	LD50 > 5,000 mg/kg
Silicon dioxide	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Silicon dioxide	Ingestion	Rat	LD50 > 5,110 mg/kg
Aluminium oxide	Dermal		LD50 estimated to be > 5,000 mg/kg
Aluminium oxide	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 2.3 mg/l
Aluminium oxide	Ingestion	Rat	LD50 > 5,000 mg/kg
3-aminomethyl-3,5,5-trimethylcyclohexylamine	Dermal	Rat	LD50 > 2,000 mg/kg
3-aminomethyl-3,5,5-trimethylcyclohexylamine	Inhalation-Dust/Mist (4 hours)	Rat	LC50 estimated to be 1 - 5 mg/l
3-aminomethyl-3,5,5-trimethylcyclohexylamine	Ingestion	Rat	LD50 1,030 mg/kg
Disodium oxide	Ingestion	Professional judgement	LD50 estimated to be 50 - 300 mg/kg
Calcium Oxide	Ingestion	Rat	LD50 > 2,500 mg/kg
Calcium Oxide	Dermal	similar compounds	LD50 > 2,500 mg/kg
m-Xylene-.alpha.alpha'.-diamine	Dermal	Rabbit	LD50 > 2,000 mg/kg
m-Xylene-.alpha.alpha'.-diamine	Inhalation-Dust/Mist (4 hours)	Rat	LC50 1.2 mg/l
m-Xylene-.alpha.alpha'.-diamine	Ingestion	Rat	LD50 980 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Propylidyntrimethanol, propoxylated	Rabbit	No significant irritation
Cyclohex-1,4-ylenedimethanol	Rabbit	No significant irritation
Silicon dioxide	Rabbit	No significant irritation
Aluminium oxide	Rabbit	No significant irritation
3-aminomethyl-3,5,5-trimethylcyclohexylamine	official classification	Corrosive
Potassium Oxide	official classification	Corrosive
Calcium Oxide	Human	Corrosive

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Disodium oxide	similar compounds	Corrosive
m-Xylene-.alpha.alpha'.-diamine	Rat	Corrosive

Serious Eye Damage/Irritation

Name	Species	Value
Propylidynetrimethanol, propoxylated	Rabbit	Mild irritant
Cyclohex-1,4-ylenedimethanol	Rabbit	Corrosive
Silicon dioxide	Rabbit	No significant irritation
Aluminium oxide	Rabbit	No significant irritation
3-aminomethyl-3,5,5-trimethylcyclohexylamine	Rabbit	Corrosive
Potassium Oxide	similar health hazards	Corrosive
Calcium Oxide	Rabbit	Corrosive
Disodium oxide	similar compounds	Corrosive
m-Xylene-.alpha.alpha'.-diamine	Rabbit	Corrosive

Skin Sensitisation

Name	Species	Value
Cyclohex-1,4-ylenedimethanol	Guinea pig	Not classified
Silicon dioxide	Human and animal	Not classified
3-aminomethyl-3,5,5-trimethylcyclohexylamine	Guinea pig	Sensitising
m-Xylene-.alpha.alpha'.-diamine	Guinea pig	Sensitising

Respiratory Sensitisation

For the component/components, either no data is currently available or the data is not sufficient for classification.

Germ Cell Mutagenicity

Name	Route	Value
Cyclohex-1,4-ylenedimethanol	In Vitro	Not mutagenic
Cyclohex-1,4-ylenedimethanol	In vivo	Not mutagenic
Silicon dioxide	In Vitro	Not mutagenic
Aluminium oxide	In Vitro	Not mutagenic
3-aminomethyl-3,5,5-trimethylcyclohexylamine	In Vitro	Not mutagenic
3-aminomethyl-3,5,5-trimethylcyclohexylamine	In vivo	Not mutagenic
Calcium Oxide	In Vitro	Not mutagenic
m-Xylene-.alpha.alpha'.-diamine	In Vitro	Not mutagenic
m-Xylene-.alpha.alpha'.-diamine	In vivo	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Silicon dioxide	Not specified.	Mouse	Some positive data exist, but the data are not sufficient for classification
Aluminium oxide	Inhalation	Rat	Not carcinogenic

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

Name	Route	Value	Species	Test result	Exposure
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					Duration
Cyclohex-1,4-ylenedimethanol	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,360 mg/kg/day	prematuring into lactation
Cyclohex-1,4-ylenedimethanol	Ingestion	Not classified for male reproduction	Rat	NOAEL 479 mg/kg/day	91 days
Cyclohex-1,4-ylenedimethanol	Ingestion	Not classified for development	Rat	NOAEL 854 mg/kg/day	prematuring into lactation
Silicon dioxide	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Silicon dioxide	Ingestion	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Silicon dioxide	Ingestion	Not classified for development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
3-aminomethyl-3,5,5-trimethylcyclohexylamine	Ingestion	Not classified for development	Rat	NOAEL 250 mg/kg/day	during gestation
m-Xylene-.alpha.alpha'.-diamine	Ingestion	Not classified for female reproduction	Rat	NOAEL 450 mg/kg/day	1 generation
m-Xylene-.alpha.alpha'.-diamine	Ingestion	Not classified for male reproduction	Rat	NOAEL 450 mg/kg	1 generation
m-Xylene-.alpha.alpha'.-diamine	Ingestion	Not classified for development	Rat	NOAEL 450 mg/kg/day	1 generation

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

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Cyclohex-1,4-ylenedimethanol	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	
3-aminomethyl-3,5,5-trimethylcyclohexylamine	Inhalation	respiratory irritation	May cause respiratory irritation	Rat	LOAEL 0.002 mg/l	2 weeks
Potassium Oxide	Inhalation	respiratory irritation	May cause respiratory irritation	similar health hazards	NOAEL Not available	
Calcium Oxide	Inhalation	respiratory irritation	May cause respiratory irritation	Not available	NOAEL Not available	occupational exposure
Disodium oxide	Inhalation	respiratory irritation	May cause respiratory irritation	Professional judgement	NOAEL Not available	
m-Xylene-.alpha.alpha'.-diamine	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
Cyclohex-1,4-ylenedimethanol	Ingestion	heart immune system kidney and/or bladder endocrine system hematopoietic system liver nervous system eyes	Not classified	Rat	NOAEL 861 mg/kg/day	13 weeks
Silicon dioxide	Inhalation	respiratory system silicosis	Not classified	Human	NOAEL Not available	occupational exposure
Aluminium oxide	Inhalation	pneumoconiosis	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
Aluminium oxide	Inhalation	pulmonary fibrosis	Not classified	Human	NOAEL Not available	occupational exposure
3-aminomethyl-3,5,5-	Ingestion	hematopoietic	Not classified	Rat	NOAEL 160	13 weeks

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trimethylcyclohexylamine		system liver kidney and/or bladder			mg/kg/day	
m-Xylene-.alpha.alpha'.-diamine	Ingestion	endocrine system blood bone marrow	Not classified	Rat	NOAEL 600 mg/kg/day	28 days

Aspiration Hazard

For the component/components, either no data is currently available or the data is not sufficient for classification.

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.

11.2. Information on other hazards

This material does not contain any substances that are assessed to be an endocrine disruptor for human health.

SECTION 12: Ecological information

The information below may not agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 12 are based on UN GHS calculation rules and classifications derived from 3M assessments.

12.1. Toxicity

No product test data available.

Material	CAS #	Organism	Type	Exposure	Test endpoint	Test result
Glycerol poly(oxyethylene, oxypropylene) ether	9082-00-2		Data not available or insufficient for classification			N/A
Propylidynetrimethanol, propoxylated	25723-16-4	Activated sludge	Experimental	3 hours	EC10	>10,000 mg/l
Propylidynetrimethanol, propoxylated	25723-16-4	Green algae	Experimental	72 hours	EC50	>100 mg/l
Propylidynetrimethanol, propoxylated	25723-16-4	Water flea	Experimental	48 hours	EC50	>100 mg/l
Propylidynetrimethanol, propoxylated	25723-16-4	Zebra Fish	Experimental	96 hours	LC50	>100 mg/l
Propylidynetrimethanol, propoxylated	25723-16-4	Green algae	Experimental	72 hours	NOEC	100 mg/l
Propylidynetrimethanol, propoxylated	25723-16-4	Water flea	Experimental	21 days	NOEC	8.5 mg/l
Cyclohex-1,4-ylenedimethanol	105-08-8	Green Algae	Experimental	72 hours	EC50	>122.9 mg/l
Cyclohex-1,4-ylenedimethanol	105-08-8	Medaka	Experimental	96 hours	LC50	>125.3 mg/l
Cyclohex-1,4-ylenedimethanol	105-08-8	Water flea	Experimental	48 hours	EC50	>100 mg/l
Cyclohex-1,4-ylenedimethanol	105-08-8	Green Algae	Experimental	72 hours	NOEC	122.9 mg/l
Silicon dioxide	7631-86-9		Data not available or insufficient for classification			N/A
Aluminium oxide	1344-28-1	Fish	Experimental	96 hours	LC50	>100 mg/l
Aluminium oxide	1344-28-1	Green Algae	Experimental	72 hours	EC50	>100 mg/l
Aluminium oxide	1344-28-1	Water flea	Experimental	48 hours	LC50	>100 mg/l

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Aluminium oxide	1344-28-1	Green Algae	Experimental	72 hours	NOEC	>100 mg/l
Calcium Oxide	1305-78-8	Common Carp	Experimental	96 hours	LC50	1,070 mg/l
3-aminomethyl-3,5,5-trimethylcyclohexylamine	2855-13-2	Bacteria	Experimental	18 hours	EC10	1,120 mg/l
3-aminomethyl-3,5,5-trimethylcyclohexylamine	2855-13-2	Golden Orfe	Experimental	96 hours	LC50	110 mg/l
3-aminomethyl-3,5,5-trimethylcyclohexylamine	2855-13-2	Green algae	Experimental	72 hours	EC50	>50 mg/l
3-aminomethyl-3,5,5-trimethylcyclohexylamine	2855-13-2	Water flea	Experimental	48 hours	EC50	23 mg/l
3-aminomethyl-3,5,5-trimethylcyclohexylamine	2855-13-2	Green algae	Experimental	72 hours	EC10	11.2 mg/l
3-aminomethyl-3,5,5-trimethylcyclohexylamine	2855-13-2	Water flea	Experimental	21 days	NOEC	3 mg/l
Potassium Oxide	12136-45-7	Water flea	Estimated	48 hours	EC50	112 mg/l
Potassium Oxide	12136-45-7	Fish other	Experimental	96 hours	LC50	917.6 mg/l
Potassium Oxide	12136-45-7	Water flea	Estimated	21 days	NOEC	68 mg/l
Disodium oxide	1313-59-3		Data not available or insufficient for classification			N/A
m-Xylene-.alpha.alpha'.-diamine	1477-55-0	Activated sludge	Experimental	30 minutes	EC50	>1,000 mg/l
m-Xylene-.alpha.alpha'.-diamine	1477-55-0	Bacteria	Experimental	16 hours	EC10	24 mg/l
m-Xylene-.alpha.alpha'.-diamine	1477-55-0	Green Algae	Experimental	72 hours	EC50	28 mg/l
m-Xylene-.alpha.alpha'.-diamine	1477-55-0	Medaka	Experimental	96 hours	LC50	87.6 mg/l
m-Xylene-.alpha.alpha'.-diamine	1477-55-0	Water flea	Experimental	48 hours	EC50	15.2 mg/l
m-Xylene-.alpha.alpha'.-diamine	1477-55-0	Green Algae	Experimental	72 hours	NOEC	9.8 mg/l
m-Xylene-.alpha.alpha'.-diamine	1477-55-0	Water flea	Experimental	21 days	NOEC	4.7 mg/l

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Glycerol poly(oxyethylene, oxypropylene) ether	9082-00-2	Modeled Biodegradation	28 days	BOD	20 % BOD/ThBOD	Catalogic™
Propylidynetrimethanol, propoxylated	25723-16-4	Experimental Biodegradation	28 days	BOD	84 % BOD/ThBOD	Non-standard method
Cyclohex-1,4-ylenedimethanol	105-08-8	Experimental Biodegradation	28 days	Dissolv. Organic Carbon Deplet	99.2 % weight	OECD 301A - DOC Die Away Test
Silicon dioxide	7631-86-9	Data not available/insufficient			N/A	
Aluminium oxide	1344-28-1	Data not available/insufficient			N/A	

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Calcium Oxide	1305-78-8	Data not available/insufficient			N/A	
3-aminomethyl-3,5,5-trimethylcyclohexylamine	2855-13-2	Experimental Biodegradation	28 days	Dissolv. Organic Carbon Deplet	8 % weight	Non-standard method
Potassium Oxide	12136-45-7	Data not available/insufficient			N/A	
Disodium oxide	1313-59-3	Data not available/insufficient			N/A	
m-Xylene-.alpha.alpha'-.diamine	1477-55-0	Experimental Biodegradation	28 days	CO2 evolution	49 %CO2 evolution/THC O2 evolution	OECD 301B - Modified sturm or CO2

12.3 : Bioaccumulative potential

Material	Cas No.	Test type	Duration	Study Type	Test result	Protocol
Glycerol poly(oxyethylene, oxypropylene) ether	9082-00-2	Modeled Bioconcentration		Bioaccumulation factor	2	Catalogic™
Glycerol poly(oxyethylene, oxypropylene) ether	9082-00-2	Modeled Bioconcentration		Log Kow	-2.6	Episuite™
Propylidynetrimethanol, propoxylated	25723-16-4	Experimental Bioconcentration		Log Kow	1.8	Non-standard method
Cyclohex-1,4-ylenedimethanol	105-08-8	Estimated Bioconcentration		Bioaccumulation factor	2.8	Estimated: Bioconcentration factor
Silicon dioxide	7631-86-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Aluminium oxide	1344-28-1	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Calcium Oxide	1305-78-8	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
3-aminomethyl-3,5,5-trimethylcyclohexylamine	2855-13-2	Experimental Bioconcentration		Log Kow	0.99	Non-standard method
Potassium Oxide	12136-45-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Disodium oxide	1313-59-3	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
m-Xylene-.alpha.alpha'-.diamine	1477-55-0	Experimental BCF-Carp	42 days	Bioaccumulation factor	<2.7	OECD 305E - Bioaccumulation flow-through fish test

12.4. Mobility in soil

Material	Cas No.	Test type	Study Type	Test result	Protocol
Glycerol poly(oxyethylene, oxypropylene) ether	9082-00-2	Modeled Mobility in Soil	Koc	13 l/kg	Episuite™
Propylidynetrimethanol, propoxylated	25723-16-4	Experimental Mobility in Soil	Koc	<1 l/kg	OECD 121 Estim. of Koc by HPLC
Cyclohex-1,4-ylenedimethanol	105-08-8	Estimated Mobility in Soil	Koc	10 l/kg	Episuite™

12.5. Results of the PBT and vPvB assessment

This material does not contain any substances that are assessed to be a PBT or vPvB

12.6. Endocrine disrupting properties

This material does not contain any substances that are assessed to be an endocrine disruptor for environmental effects

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

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

EU waste code (product as sold)

08 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

Not hazardous for transportation.

	Ground Transport (ADR)	Air Transport (IATA)	Marine Transport (IMDG)
14.1 UN number	No data available.	No Data Available	No Data Available
14.2 UN proper shipping name	No data available.	No Data Available	No Data Available
14.3 Transport hazard class(es)	No data available.	No Data Available	No Data Available
14.4 Packing group	No data available.	No Data Available	No Data Available
14.5 Environmental hazards	No data available.	No Data Available	No Data Available
14.6 Special precautions for user	Please refer to the other sections of the SDS for further information.	Please refer to the other sections of the SDS for further information.	Please refer to the other sections of the SDS for further information.
14.7 Transport in bulk according to Annex II of Marpol 73/78 and IBC Code	No data available.	No Data Available	No Data Available

Control Temperature	No data available.	No Data Available	No Data Available
Emergency Temperature	No data available.	No Data Available	No Data Available
ADR Tunnel Code	No data available.	Not Applicable	No Data Available
ADR Classification Code	No data available.	No Data Available	No Data Available
ADR Transport Category	No data available.	No Data Available	No Data Available
ADR Multiplier	No data available.	No Data Available	No Data Available
IMDG Segregation Code	No data available.	No Data Available	No Data Available
Transport not Permitted	No data available.	No Data Available	No Data Available

Please contact the address or phone number listed on the first page of the SDS for additional information on the transport/shipment of the material by rail (RID) or inland waterways (ADN).

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

15.2. Chemical Safety Assessment

A chemical safety assessment has not been carried out for this mixture. Chemical safety assessments for the contained substances may have been carried out by the registrants of the substances in accordance with Regulation (EC) No 1907/2006, as amended.

SECTION 16: Other information

List of relevant H statements

EUH014 Reacts violently with water.
 EUH071 Corrosive to the respiratory tract.
 H301 Toxic if swallowed.
 H302 Harmful if swallowed.

H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H412	Harmful to aquatic life with long lasting effects.

Revision information:

EU Section 09: pH information information was added.
Section 2: <125ml Precautionary - Response information was modified.
CLP: Ingredient table information was modified.
Label: CLP Classification information was modified.
Label: CLP Percent Unknown information was modified.
Label: CLP Precautionary - Response information was modified.
Section 03: Composition table % Column heading information was added.
Section 3: Composition/ Information of ingredients table information was modified.
Section 03: SCL table information was added.
Section 03: Substance not applicable information was added.
Section 04: First Aid - Symptoms and Effects (CLP) information was added.
Section 4: First aid for ingestion (swallowing) information information was modified.
Section 04: Information on toxicological effects information was modified.
Section 5: Hazardous combustion products table information was modified.
Section 8: glove data value information was modified.
Section 8: Occupational exposure limit table information was modified.
Section 8: Personal Protection - Skin/hand information information was modified.
Section 8: Skin protection - protective clothing information information was modified.
Section 09: Color information was added.
Section 9: Evaporation Rate information information was deleted.
Section 9: Explosive properties information information was deleted.
Section 09: Kinematic Viscosity information information was added.
Section 9: Melting point information information was modified.
Section 09: Odor information was added.
Sections 3 and 9: Odour, colour, grade information information was deleted.
Section 9: Oxidising properties information information was deleted.
Section 9: pH information information was deleted.
Section 9: Property description for optional properties information was modified.
Section 9: Vapour density value information was added.
Section 9: Vapour density value information was deleted.
Section 9: Viscosity information information was deleted.
Section 11: Acute Toxicity table information was modified.
Section 11: Classification disclaimer information was modified.
Section 11: Germ Cell Mutagenicity Table information was modified.
Section 11: Health Effects - Ingestion information information was modified.
Section 11: No endocrine disruptor information available warning information was added.
Section 11: Reproductive Toxicity Table information was modified.
Section 11: Serious Eye Damage/Irritation Table information was modified.
Section 11: Skin Corrosion/Irritation Table information was modified.
Section 11: Skin Sensitization Table information was modified.
Section 11: Target Organs - Repeated Table information was modified.
Section 11: Target Organs - Single Table information was modified.
Section 12: 12.6. Endocrine Disrupting Properties information was added.
Section 12: 12.7. Other adverse effects information was modified.
Section 12: Component ecotoxicity information information was modified.
Section 12: Contact manufacturer for more detail. information was deleted.
Section 12: Mobility in soil information information was added.

Section 12: No endocrine disruptor information available warning information was added.
Section 12: Persistence and Degradability information information was modified.
Section 12: Bioaccumulative potential information information was modified.
Section 13: Standard Phrase Category Waste GHS information was modified.
Section 14 Classification Code – Main Heading information was added.
Section 14 Classification Code – Regulation Data information was added.
Section 14 Control Temperature – Main Heading information was added.
Section 14 Control Temperature – Regulation Data information was added.
Section 14 Disclaimer Information information was added.
Section 14 Emergency Temperature – Main Heading information was added.
Section 14 Emergency Temperature – Regulation Data information was added.
Section 14 Hazard Class + Sub Risk – Main Heading information was added.
Section 14 Hazard Class + Sub Risk – Regulation Data information was added.
Section 14 Hazardous/Not Hazardous for Transportation information was added.
Section 14 Multiplier – Main Heading information was added.
Section 14 Multiplier – Regulation Data information was added.
Section 14 Other Dangerous Goods – Main Heading information was added.
Section 14 Other Dangerous Goods – Regulation Data information was added.
Section 14 Packing Group – Main Heading information was added.
Section 14 Packing Group – Regulation Data information was added.
Section 14 Proper Shipping Name information was added.
Section 14 Regulations – Main Headings information was added.
Section 14 Segregation – Regulation Data information was added.
Section 14 Segregation Code – Main Heading information was added.
Section 14 Special Precautions – Main Heading information was added.
Section 14 Special Precautions – Regulation Data information was added.
Section 14 Transport Category – Main Heading information was added.
Section 14 Transport Category – Regulation Data information was added.
Section 14 Transport in bulk – Regulation Data information was added.
Section 14 Transport in bulk according to Annex II of Marpol and the IBC Code – Main Heading information was added.
Section 14 Transport Not Permitted – Main Heading information was added.
Section 14 Transport Not Permitted – Regulation Data information was added.
Section 14 Tunnel Code – Main Heading information was added.
Section 14 Tunnel Code – Regulation Data information was added.
Section 14 UN Number Column data information was added.
Section 14 UN Number information was added.
Section 14: Transportation classification information was deleted.
Section 16: UK disclaimer 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. In addition, this SDS is being provided to convey health and safety information. If you are the importer of record of this product into the European Union, you are responsible for all regulatory requirements, including, but not limited to, product registrations/notifications, substance volume tracking, and potential substance registration.

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