Safety Data Sheet

Document group:	18-0740-3	**Version number:**	6.00
Revision date:	09/08/2013	**Supersedes date:**	20/02/2012

Transportation version number: 1.00 (27/06/2011)

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 DP-600 Concrete Repair Self-Leveling, Grey

Product identification numbers
FS-9100-4145-8

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

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:

18-0901-1, 18-0894-8

TRANSPORTATION INFORMATION

FS-9100-4145-8

Not hazardous for transportation

KIT LABEL

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

SIGNAL WORD
DANGER!

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

Pictograms

HAZARD STATEMENTS:

H331	Toxic if inhaled.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317	May cause an allergic skin reaction.
H335	May cause respiratory irritation.
H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure: respiratory system
H412	Harmful to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

Prevention:

P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P285	In case of inadequate ventilation wear respiratory protection.
P280E	Wear protective gloves.

Response:

P304 + P341	IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
P342 + P311	If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.

Disposal:

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

SUPPLEMENTAL INFORMATION

Supplemental Hazard Statements:

EUH204	Contains isocyanates. May produce an allergic reaction.

.

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

Symbol(s)

Harmful

Contains:
Consult the component labels for disclosable ingredients.

Risk phrases

R20	Harmful by inhalation.
R36/37/38	Irritating to eyes, respiratory system and skin.
R42/43	May cause sensitisation by inhalation and skin contact.
R48/20	Harmful: danger of serious damage to health by prolonged exposure through inhalation.
R40	Limited evidence of a carcinogenic effect.
R52/53	Harmful to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

Safety phrases

S22	Do not breathe dust.
S23A	Do not breathe vapour.
S24	Avoid contact with skin.
S36/37	Wear suitable protective clothing and gloves.
S45	In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S61	Avoid release to the environment. Refer to special instructions/safety data sheets.

Special provisions concerning the labelling of certain substances

Contains isocyanates. See information supplied by manufacturer.

Notes on labelling

For containers <125mL, use Xn, R20-42/43-48/20-40-52/53, S23A-22-24-36/37-45-2044

Revision information:
Revision Changes:
Safety phrase was modified.
Kit: Component document group number(s) was modified.
Copyright was modified.
Label: Signal Word - Header was added.
Label: Signal Word was added.
Label: CLP Classification was added.
Label: CLP Classification - Header was added.
Label: CLP Target Organ Hazard Statement was added.
Label: CLP Environmental Hazard Statements was added.
Label: Graphic was added.
Label: Graphic was added.
Label: Symbol was added.
Label: Symbol was added.
Label: CLP Precautionary - Disposal was added.
Label: CLP Precautionary - Disposal - Header was added.
Label: CLP Precautionary - Prevention was added.
Label: CLP Precautionary - Prevention - Header was added.
Label: CLP Precautionary - Response was added.
Label: CLP Precautionary - Response - Header was added.

Label: Precautionary Statement - Header was added.
Label: CLP Supplemental Hazard Statements was added.
Label: CLP Supplemental Hazard Statements - Header was added.
Label: CLP Supplemental Information - Header was added.
Section 2: 2.2 & 2.3. CLP REGULATION heading was added.
Label: Graphic was added.
Label: Graphic was added.
Label: Graphic Text was added.
Section 2: Symbol was deleted.
Section 2: Symbols heading was deleted.

Safety Data Sheet

Document group:	18-0894-8	**Version number:**	6.00
Revision date:	09/08/2013	**Supersedes date:**	20/02/2012

Transportation version number: 1.00 (27/06/2011)

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 Scotch-Weld DP-600 Concrete Repair, Self-Leveling Grey (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 substance or mixture

Address: 3M United Kingdom PLC, 3M Centre, Cain Road, Bracknell, Berkshire, RG12 8HT.

E Mail: tox.uk@mmm.com
Website: www.3M.com/uk

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

SECTION 2: Hazard identification

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

CLASSIFICATION:
Acute Toxicity, Category 3 - Acute Tox. 3; H331
Serious Eye Damage/Eye Irritation, Category 2 - Eye Irrit. 2; H319
Skin Corrosion/Irritation, Category 2 - Skin Irrit. 2; H315
Respiratory Sensitization, Category 1 - Resp. Sens. 1; H334
Skin Sensitization, Category 1 - Skin Sens. 1; H317
Carcinogenicity, Category 2 - Carc. 2; H351
Specific Target Organ Toxicity-Single Exposure, Category 3 - STOT SE 3; H335
Specific Target Organ Toxicity-Repeated Exposure, Category 2 - STOT RE 2; H373

For full text of H phrases, see Section 16.

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

Indication of danger
Carcinogenic; Carc. Cat. 3; R40
Harmful; Xn; R20
Irritant; Xi; R36/37/38
Sensitizing; R42/43
Harmful; Xn; R48/20

For full text of R 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

Ingredient	CAS Nbr	% by Wt
4,4'-methylenediphenyl diisocyanate	101-68-8	30 - 60
4,4'-Methylenediphenyl diisocyanate, oligomers	25686-28-6	15 - 40

HAZARD STATEMENTS:

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

PRECAUTIONARY STATEMENTS

Prevention:

P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P285	In case of inadequate ventilation wear respiratory protection.
P280E	Wear protective gloves.

Response:

P304 + P341	IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
P342 + P311	If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.

SUPPLEMENTAL INFORMATION

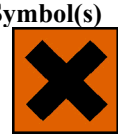
Supplemental Hazard Statements:

EUH204	Contains isocyanates. May produce an allergic reaction.

Contains 30% of components with unknown hazards to the aquatic environment.

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

Symbol(s)



Harmful

Contains:
4,4'-Methylenediphenyl diisocyanate, oligomers; 4,4'-methylenediphenyl diisocyanate

Risk phrases

R20	Harmful by inhalation.
R36/37/38	Irritating to eyes, respiratory system and skin.
R42/43	May cause sensitisation by inhalation and skin contact.
R48/20	Harmful: danger of serious damage to health by prolonged exposure through inhalation.
R40	Limited evidence of a carcinogenic effect.

Safety phrases

S22	Do not breathe dust.
S23A	Do not breathe vapour.
S36/37	Wear suitable protective clothing and gloves.
S45	In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Special provisions concerning the labelling of certain substances

Contains isocyanates. 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'-methylenediphenyl diisocyanate (REACH Reg. No.:01-2119457014-47)	101-68-8	EINECS 202-966-0	30 - 60	Carc.Cat.3:R40; Xn:R20-48/20; Xi:R36-37-38; R42-43 - Nota 2,C (EU) Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Resp. Sens. 1, H334; Skin Sens. 1, H317; Carc. 2, H351; STOT SE 3, H335; STOT RE 2, H373 - Nota 2,C (CLP)
Castor oil, polymer with 1,1'-	68424-09-9		15 - 40	

methylenebis[4-isocyanatobenzene]				
4,4'-Methylenediphenyl diisocyanate, oligomers	25686-28-6	NLP 500-040-3	15 - 40	Carc.Cat.3:R40; Xn:R20-48/20; Xi:R36-37-38; R42-43 (Vendor) Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Resp. Sens. 1, H334; Skin Sens. 1, H317; Carc. 2, H351; STOT RE 2, H373 (Vendor)
Dimethyl siloxane, reaction product with silica	67762-90-7		1 - 5	

Please see section 16 for the full text of any R phrases and H statements referred to in this section
Please refer to section 15 for the any applicable Notas that have been applied to the above components

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

SECTION 4: First aid measures

4.1. Description of first aid measures

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

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

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

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

4.2. Most important symptoms and effects, both acute and delayed
See Section 11.1 Information on toxicological effects

4.3. Indication of any immediate medical attention and special treatment required
Not applicable

SECTION 5: Fire-fighting measures

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

5.2. Special hazards arising from the substance or mixture
None inherent in this product.

Hazardous Decomposition or By-Products

Substance	Condition
Carbon monoxide.	During combustion.
Carbon dioxide.	During combustion.
Oxides of nitrogen.	During combustion.
Toxic vapour, gas, particulate.	During combustion.

5.3. Advice for fire-fighters
No unusual fire or explosion hazards are anticipated.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapours, in accordance with good industrial hygiene practice. Warning: A motor could be an ignition source and could cause flammable gases or vapours in the spill area to burn or explode. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

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

6.3. Methods and material for containment and cleaning up
Contain spill. 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 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 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. Clean up residue with detergent and water. 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 of dust created by cutting, sanding, grinding or machining. Do not use in a confined area or areas with little or no air movement. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Use personal protective equipment (eg. gloves, respirators…) as required.

7.2. Conditions for safe storage including any incompatibilities
Store in a well-ventilated place. Keep container tightly closed. 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

Ingredient	CAS Nbr	Agency	Limit type	Additional comments

Free isocyanates	101-68-8	Manufacturer determined	TWA:0.005 ppm;STEL:0.02 ppm	
Free isocyanates	101-68-8	Health and Safety Comm. (UK)	TWA(as NCO):0.02 mg/m3;STEL(as NCO):0.07 mg/m3	Respiratory Sensitizer
Silica, amorphous	67762-90-7	Health and Safety Comm. (UK)	TWA(as inhalable dust):6 mg/m3;TWA(as respirable dust):2.4 mg/m3	

Health and Safety Comm. (UK) : UK Health and Safety Commission
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
ppm: parts per million
mg/m³: milligrams per cubic metre
CEIL: Ceiling

Derived no effect level (DNEL)

Ingredient	Degradation Product	Population	Human exposure pattern	DNEL
4,4'-methylenediphenyl diisocyanate		Worker	Dermal, Short-term exposure, Local effects	28.7 mg/cm2
4,4'-methylenediphenyl diisocyanate		Worker	Dermal, Short-term exposure, Systemic effects	50 mg/kg bw/d
4,4'-methylenediphenyl diisocyanate		Worker	Inhalation, Long-term exposure (8 hours), Local effects	0.05 mg/m³
4,4'-methylenediphenyl diisocyanate		Worker	Inhalation, Long-term exposure (8 hours), Systemic effects	0.05 mg/m³
4,4'-methylenediphenyl diisocyanate		Worker	Inhalation, Short-term exposure, Local effects	0.1 mg/m³
4,4'-methylenediphenyl diisocyanate		Worker	Inhalation, Short-term exposure, Systemic effects	0.1 mg/m³

Predicted no effect concentrations (PNEC)

Ingredient	Degradation Product	Compartment	PNEC
4,4'-methylenediphenyl diisocyanate		Agricultural soil	1 mg/kg w.w.
4,4'-methylenediphenyl diisocyanate		Freshwater	1 mg/l
4,4'-methylenediphenyl diisocyanate		Intermittent releases to water	10 mg/l
4,4'-methylenediphenyl diisocyanate		Marine water	0.1 mg/l
4,4'-methylenediphenyl diisocyanate		Sewage Treatment Plant	1 mg/l

8.2. Exposure controls

In addition, refer to the annex for more information.

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

Wear eye/face protection.
The following eye protection(s) are recommended: Indirect vented goggles.

Skin/hand protection

Wear protective gloves.
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: Butyl rubber.
Nitrile rubber.

Respiratory protection

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

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

8.2.3. Environmental exposure controls
Refer to Annex

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid.
Specific Physical Form:	Viscous.
Appearance/Odour	Low or no detectable odour, opaque.
Odour threshold	*No data available.*
pH	*Not applicable.*
Boiling point/boiling range	>=204.4 ºC
Melting point	*No data available.*
Flammability (solid, gas)	Not applicable.
Explosive properties	Not classified
Oxidising properties	Not classified
Flash point	>=143.3 ºC [*Test Method:*Tagliabue closed cup]
Autoignition temperature	*Not applicable.*
Flammable Limits(LEL)	*Not applicable.*
Flammable Limits(UEL)	*Not applicable.*
Vapour pressure	<=0 Pa [@ 20 ºC]
Relative density	1.11
Water solubility	Negligible
Solubility- non-water	*No data available.*
Partition coefficient: n-octanol/water	*No data available.*
Evaporation rate	<=1 [*Details:*Gels with exposure to humidity.]
Vapour density	>=1 [*Ref Std:*AIR=1]

Decomposition temperature	*No data available.*
Viscosity	1.25 - 2.75 Pa-s
Density	1.11 g/ml

9.2. Other information

Hazardous air pollutants	53.4 % weight [*Test Method:*Calculated]
Volatile organic compounds (VOC)	< 10 g/l [*Details:*EU VOC content]
Percent volatile	0 % weight [*Test Method:*Estimated]
VOC less H2O & exempt solvents	< 10 g/l [*Test Method:*calculated SCAQMD rule 443.1]
VOC less H2O & exempt solvents	<=1 g/l [*Test Method:*calculated SCAQMD rule 443.1] [*Details:*when used as intended with Part B]

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

Substance	**Condition**
None known.	

SECTION 11: Toxicological information

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

11.1 Information on Toxicological effects

Signs and Symptoms of Exposure

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

Inhalation
Respiratory tract irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. Allergic respiratory reaction: Signs/symptoms may include difficulty breathing, wheezing, cough, and

tightness of chest. Dust from cutting, grinding, sanding or machining may cause irritation of the respiratory system: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, nose and throat pain. May cause target organ effects after inhalation.

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

Eye contact
Severe eye irritation: Signs/symptoms may include significant redness, swelling, pain, tearing, cloudy appearance of the cornea, and impaired vision. Dust created by cutting, grinding, sanding, or machining may cause eye irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

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

Target Organ Effects:

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

Carcinogenicity:
Contains a chemical or chemicals which can cause cancer.

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

Toxicological Data

Acute Toxicity

Name	Route	Species	Value
Overall product	Ingestion		Data not available or insufficient for classification; calculated ATE >5,000 mg/kg
4,4'-methylenediphenyl diisocyanate	Inhalation-Vapor		LC50 estimated to be 10 - 20 mg/l
4,4'-methylenediphenyl diisocyanate	Dermal	Rabbit	LD50 > 5,000 mg/kg
4,4'-methylenediphenyl diisocyanate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 0.369 mg/l
4,4'-methylenediphenyl diisocyanate	Ingestion	Rat	LD50 31,600 mg/kg
4,4'-Methylenediphenyl diisocyanate, oligomers			Data not available or insufficient for classification
Castor oil, polymer with 1,1'-methylenebis[4-isocyanatobenzene]			Data not available or insufficient for classification
Dimethyl siloxane, reaction product with silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
Dimethyl siloxane, reaction product with silica	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Dimethyl siloxane, reaction product with silica	Ingestion	Rat	LD50 > 5,110 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
4,4'-methylenediphenyl diisocyanate	official classification	Irritant
4,4'-Methylenediphenyl diisocyanate, oligomers		Data not available or insufficient for classification
Castor oil, polymer with 1,1'-methylenebis[4-		Data not available or insufficient for

isocyanatobenzene]		classification
Dimethyl siloxane, reaction product with silica	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
4,4'-methylenediphenyl diisocyanate	official classification	Severe irritant
4,4'-Methylenediphenyl diisocyanate, oligomers		Data not available or insufficient for classification
Castor oil, polymer with 1,1'-methylenebis[4-isocyanatobenzene]		Data not available or insufficient for classification
Dimethyl siloxane, reaction product with silica	Rabbit	No significant irritation

Skin Sensitisation

Name	Species	Value
4,4'-methylenediphenyl diisocyanate	official classification	Sensitising
4,4'-Methylenediphenyl diisocyanate, oligomers		Data not available or insufficient for classification
Castor oil, polymer with 1,1'-methylenebis[4-isocyanatobenzene]		Data not available or insufficient for classification
Dimethyl siloxane, reaction product with silica	Human and animal	Not sensitizing

Respiratory Sensitisation

Name	Species	Value
4,4'-methylenediphenyl diisocyanate	Human	Sensitising
4,4'-Methylenediphenyl diisocyanate, oligomers		Data not available or insufficient for classification
Castor oil, polymer with 1,1'-methylenebis[4-isocyanatobenzene]		Data not available or insufficient for classification
Dimethyl siloxane, reaction product with silica		Data not available or insufficient for classification

Germ Cell Mutagenicity

Name	Route	Value
4,4'-methylenediphenyl diisocyanate	In Vitro	Some positive data exist, but the data are not sufficient for classification
4,4'-Methylenediphenyl diisocyanate, oligomers		Data not available or insufficient for classification
Castor oil, polymer with 1,1'-methylenebis[4-isocyanatobenzene]		Data not available or insufficient for classification
Dimethyl siloxane, reaction product with silica	In Vitro	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
4,4'-methylenediphenyl diisocyanate	Inhalation	Rat	Some positive data exist, but the data are not sufficient for classification
4,4'-Methylenediphenyl diisocyanate, oligomers			Data not available or insufficient for classification
Castor oil, polymer with 1,1'-methylenebis[4-isocyanatobenzene]			Data not available or insufficient for classification
Dimethyl siloxane, reaction product with silica	Not specified.	Mouse	Some positive data exist, but the data are not sufficient for classification

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
4,4'-methylenediphenyl diisocyanate	Inhalation	Some positive developmental data exist, but the data are	Rat	NOAEL 0.004 mg/l	during organogenesis

		not sufficient for classification			
4,4'-Methylenediphenyl diisocyanate, oligomers		Data not available or insufficient for classification			
Castor oil, polymer with 1,1'-methylenebis[4-isocyanatobenzene]		Data not available or insufficient for classification			
Dimethyl siloxane, reaction product with silica	Ingestion	Not toxic to female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Dimethyl siloxane, reaction product with silica	Ingestion	Not toxic to male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Dimethyl siloxane, reaction product with silica	Ingestion	Not toxic to development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
4,4'-methylenediphenyl diisocyanate	Inhalation	respiratory irritation	May cause respiratory irritation	official classification	NOAEL Not available	
4,4'-Methylenediphenyl diisocyanate, oligomers			Data not available or insufficient for classification			
Castor oil, polymer with 1,1'-methylenebis[4-isocyanatobenzene]			Data not available or insufficient for classification			
Dimethyl siloxane, reaction product with silica			Data not available or insufficient for classification			

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
4,4'-methylenediphenyl diisocyanate	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0.004 mg/l	13 weeks
4,4'-Methylenediphenyl diisocyanate, oligomers			Data not available or insufficient for classification			
Castor oil,			Data not available			

polymer with 1,1'-methylenebis[4-isocyanatobenzene]			or insufficient for classification			
Dimethyl siloxane, reaction product with silica	Inhalation	respiratory system | silicosis	All data are negative	Human	NOAEL Not available	occupational exposure

Aspiration Hazard

Name	Value
4,4'-methylenediphenyl diisocyanate	Not an aspiration hazard
4,4'-Methylenediphenyl diisocyanate, oligomers	Not an aspiration hazard
Castor oil, polymer with 1,1'-methylenebis[4-isocyanatobenzene]	Not an aspiration hazard
Dimethyl siloxane, reaction product with silica	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'-Methylenediphenyl diisocyanate, oligomers	25686-28-6	Zebra Fish	Estimated	24 hours	LC50	>100 mg/l
Castor oil, polymer with 1,1'-methylenebis[4-isocyanatobenzene]	68424-09-9		Data not available or insufficient for classification			
Dimethyl siloxane, reaction product with silica	67762-90-7		Data not available or insufficient for classification			
4,4'-methylenediphenyl diisocyanate	101-68-8		Data not available or insufficient for classification			

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
4,4'-methylenediphenyl diisocyanate	101-68-8	Estimated Photolysis		Photolytic half-life (in air)	2.4 days (t 1/2)	Other methods
4,4'-Methylenediphenyl diisocyanate, oligomers	25686-28-6	Estimated Hydrolysis		Hydrolytic half-life	<2 hours (t 1/2)	Other methods
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
4,4'-Methylenediphenyl diisocyanate, oligomers	25686-28-6	Estimated Biodegradation	28 days	BOD	0 % weight	OECD 301C - MITI test (I)
Dimethyl siloxane, reaction product with silica	67762-90-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
4,4'-methylenediphenyl diisocyanate	101-68-8	Experimental Biodegradation	28 days	BOD	0 % weight	OECD 301C - MITI test (I)
4,4'-methylenediphenyl diisocyanate	101-68-8	Experimental Hydrolysis		Hydrolytic half-life	<2 hours (t 1/2)	Other methods

12.3 : Bioaccumulative potential

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Dimethyl siloxane, reaction product with silica	67762-90-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
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
4,4'-	25686-28-6	Estimated	28 days	Bioaccumulati	200	Other methods

Methylenediphenyl diisocyanate, oligomers		BCF-Carp		on factor		
4,4'-methylenediphenyl diisocyanate	101-68-8	Experimental BCF-Carp	28 days	Bioaccumulation factor	200	Other methods

12.4. Mobility in soil
Please contact manufacturer for more details

12.5. Results of the PBT and vPvB assessment

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

12.6. Other adverse effects
No information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods
Dispose of contents/ container in accordance with the local/regional/national/international regulations

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
080501*	Waste isocyanates
20 01 27*	Paint, inks, adhesives and resins containing dangerous substances

SECTION 14: Transportation information

ADR: Not restricted for transport.
IMDG: Not restricted for transport.
IATA: Not restricted for transport.

SECTION 15: Regulatory information

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

Carcinogenicity

Ingredient	CAS Nbr	Classification	Regulation
4,4'-Methylenediphenyl diisocyanate, oligomers	25686-28-6	Carc. 2	Vendor classified according to

4,4'-Methylenediphenyl diisocyanate, oligomers	25686-28-6	Carc.Cat.3	Regulation (EC) No 1272/2008 Vendor classified according to Directive 67/548/EEC
4,4'-methylenediphenyl diisocyanate	101-68-8	Carc. 2	Regulation (EC) No. 1272/2008, Table 3.1
4,4'-methylenediphenyl diisocyanate	101-68-8	Carc.Cat.3	Regulation (EC) No. 1272/2008, Table 3.2
4,4'-methylenediphenyl diisocyanate	101-68-8	Gr. 3: Not classifiable	International Agency for Research on Cancer

Global inventory status
Contact 3M for more information. The components of this material are in compliance with the China "Measures on Environmental Management of New Chemical Substance". Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of the Korean Toxic Chemical Control Law. Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Australia National Industrial Chemical Notification and Assessment Scheme (NICNAS). Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of 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
A chemical safety assessment has been carried out for the relevant substances in this material by the registrant in accordance with regulation REGULATION (EC) No 1907/2006

SECTION 16: Other information

List of relevant H statements

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
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.

List of relevant R-phrases

R20	Harmful by inhalation.
R36	Irritating to eyes.
R36/37/38	Irritating to eyes, respiratory system and skin.
R37	Irritating to respiratory system.
R38	Irritating to skin.
R40	Limited evidence of a carcinogenic effect.
R42	May cause sensitisation by inhalation.
R42/43	May cause sensitisation by inhalation and skin contact.
R43	May cause sensitisation by skin contact.
R48/20	Harmful: danger of serious damage to health by prolonged exposure through inhalation.

Revision information:

Revision Changes:
Safety phrase information was modified.
Section 2: Label ingredient information information was modified.
Section 15: Carcinogenicity information information was modified.
Section 16: List of relevant R phrase information information was modified.
Section 3: Composition/ Information of ingredients table information was modified.
Section 2: Indication of danger information information was modified.
Section 9: Flammability (solid, gas) information information was modified.
Section 16: Regulations - Inventories - EU ONLY information was modified.
Copyright information was modified.
Section 8: Occupational exposure limit table information was modified.
Aspiration Hazard Table 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 - Skin information information was modified.
Section 11: Health Effects - Inhalation information information was modified.
Section 5: Fire - Extinguishing media information information was modified.
Section 6: Accidental release clean-up information information was modified.
Section 7: Precautions safe handling information information was modified.
Section 7: Conditions safe storage information was modified.
Section 13: Standard Phrase Category Waste GHS information was modified.
Two-column table displaying the unique list of H Codes and statements (std phrases) for all components of the given material. information was modified.
A chemical safety assessment has been carried out for the relevant substances in this material by the registrant in accordance with regulation REGULATION (EC) No 1907/2006 information was modified.
Section 8: Eye/face protection information information was added.
Section 8: Respiratory protection - recommended respirators information information was added.
Section 8: Eye/face protection text information was added.
Section 8: Respiratory protection - recommended respirators information was added.
Section 8: Respiratory protection - recommended respirators guide information was added.
Section 8: Skin protection - protective clothing text information was added.
Section 8: 8.2.3. Environmental exposure controls heading information was added.
Section 12: Component ecotoxicity information information was added.
Section 12: Persistence and Degradability information information was added.
Section 12:Bioccumulative 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:Bioccumulative potential table Material column header information was added.
Section 12:Bioccumulative potential table CAS No column header information was added.
Section 12:Bioccumulative potential table CAS No column header information was added.
Section 12:Bioccumulative potential table Test Result column header information was added.
Section 12:Bioccumulative potential table Protocol column header information was added.
Section 12:Bioccumulative 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 Target Organ Hazard Statement 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 - 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.
Section 8: 8.1. Derived no effect level (DNEL) table heading information was added.
Section 8: 8.1. Predicted no effect concentrations (PNEC) table heading information was added.
Section 8: 8.1. Derived no effect level (DNEL) table ingredient column heading information was added.
Section 8: 8.1. Derived no effect level (DNEL) table population column heading information was added.
Section 8: 8.1. Derived no effect level (DNEL) table human exposure pattern column heading information was added.
Section 8: 8.1. Derived no effect level (DNEL) table DNEL column heading information was added.
Section 8: DNEL table row information was added.
Section 8: 8.1. Predicted no effect concentrations (PNEC) table ingredient column heading information was added.
Section 8: 8.1. Predicted no effect concentrations (PNEC) table compartment column heading information was added.
Section 8: 8.1. Predicted no effect concentrations (PNEC) table PNEC column heading information was added.
Section 8: PNEC table row information was added.
Section 8: 8.2. Exposure controls information information was added.
Section 8: 8.2.3. Environmental exposure controls information information was added.
Annex: Free short title heading information was added.
Annex: Processes, tasks and activities covered heading information was added.
Annex: Title main heading information was added.
Annex: Identified uses heading information was added.
Annex: Operating Conditions heading information was added.
Annex: Physical state heading information was added.
Annex: Operational conditions and risk management measures main heading information was added.
Annex: Waste management measures heading information was added.
Annex: Prediction of exposure main heading information was added.
Annex: Prediction of exposure heading information was added.
Annex: Prediction of exposure statement information was added.
Section 8: 8.1. Derived no effect level (DNEL) table Degradation Product column heading information was added.
Section 8: 8.1. Predicted no effect concentrations (PNEC) table Degradation Product column 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.
Annex: Main heading information was added.
Section 12: Persistence and degradability table Study Type column header information was added.
Section 12:Bioccumulative 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 11: Prolonged or repeated exposure may cause: heading information was added.
Section 11: Prolonged or repeated exposure may cause standard phrases information was added.
Section 2: H phrase reference information was added.
Annex: Substance identification heading information was added.
Section 2: R phrase reference information was added.
Label: Graphic information was added.
Label: Graphic information was added.
Label: Graphic Text information was added.
Section 9: Flammability (solid, gas) information information was added.
Industrial Mixing and Application: Annex information was added.
Industrial Repackaging: Annex information was added.
Section 2: Symbol information was deleted.
Section 2: Symbols heading information was deleted.
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 Bioccumulative potential information is not present information was deleted.
Section 11: UN GHS Classification table heading information was deleted.
Section 11: Health Effects - Other information information was deleted.

Annex

1. Title	
Substance identification	4,4'-methylenediphenyl diisocyanate; CAS Nbr 101-68-8; EC No. 202-966-0
Free short title	Industrial Mixing and Application
Identified uses	PROC 05, ERC 06c, SU 03; PROC 09, ERC 06c, SU 03; PROC 13, ERC 06c, SU 03;
Processes, tasks and activities covered	Applying of substances/mixtures (low energy spreading) including extrusion, brushing, spatula, levelling with tools, roller coating and others. Direct application out of the cartridge. Dispensing of product with applicator gun. Mixing and filling processes, by machines and application tools. Mixing operations (closed systems). Mixing operations (open systems). Treatment of articles by dipping, pouring, immersing, soaking, washing out or washing in substances; including cold formation or resin type matrix. Includes handling of treated objects (e.g. after dying, plating,)
2. Operational conditions and risk management measures	
Operating Conditions	**Physical state:**Liquid. **General operating conditions:** Duration of exposure per day at workplace [for one worker]: 8 hours/day; Emission days per year: >= 300 days per year; Frequency of exposure at workplace [for one worker]: Daily; Indoor use; Indoor use with Local Exhaust Ventilation;

	Local freshwater dilution factor: 10 ; Local marine water dilution factor: 100 ; Open process;
Risk management measures	Under the operational conditions described above the following risk management measures apply: **General risk management measures:** **Human health:** Air-purifying Full-Face (with gas/vapour-cartridge, that can be combined with a particulate filter) (APF 20); Air-purifying Half-Mask (with gas/vapour-cartridge, that can be combined with a particulate filter) (APF 10); Dilution Ventilation; Ensure that direct skin contact is avoided; Goggles - Chemical resistant; Protective clothing / Wear suitable protective clothing; Protective Gloves - Chemical resistant; **Environmental:** None needed; ; The following task-specific risk management measures apply in addition to those listed above: **Task: Charging Hot Materials**; **Human Health**; Local Exhaust Ventilation - with captor hood; **Task: Mixing**; **Human Health**; Local Exhaust Ventilation - with captor hood; **Task: Dispensing from heater gun**; **Human Health**; Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour);
Waste management measures	Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point; Prevent discharge of undissolved substance to or recover from wastewater;
3. Prediction of exposure	
Prediction of exposure	Human exposures are not expected to exceed the DNELs when the identified risk management measures are adopted. Environmental exposures are not expected to exceed the PNECs when the identified risk management measures are adopted.

1. Title	
Substance identification	4,4'-methylenediphenyl diisocyanate; CAS Nbr 101-68-8; EC No. 202-966-0
Free short title	Industrial Repackaging
Identified uses	PROC 09, ERC 02, SU 03;
Processes, tasks and activities covered	Mixing and filling processes, by machines and application tools.
2. Operational conditions and risk management measures	
Operating Conditions	**Physical state:**Liquid. **General operating conditions:** Duration of exposure per day at workplace [for one worker]: 8 hours/day; Frequency of exposure at workplace [for one worker]: Daily; Indoor use; Indoor use with Local Exhaust Ventilation; Local freshwater dilution factor: 10 ; Local marine water dilution factor: 100 ; Open process;

Risk management measures	Under the operational conditions described above the following risk management measures apply: **General risk management measures:** **Human health:** Ensure that direct skin contact is avoided; Goggles - Chemical resistant; Protective clothing / Wear suitable protective clothing; Protective Gloves - Chemical resistant; Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour); **Environmental:** None needed;
Waste management measures	Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point; Prevent discharge of undissolved substance to or recover from wastewater;
3. Prediction of exposure	
Prediction of exposure	Human exposures are not expected to exceed the DNELs when the identified risk management measures are adopted. Environmental exposures are not expected to exceed the PNECs when the identified risk management measures are adopted.

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

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

Safety Data Sheet

Document group:	18-0901-1	**Version number:**	5.00
Revision date:	05/08/2013	**Supersedes date:**	20/02/2012

Transportation version number: 1.00 (27/06/2011)

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 Scotch-Weld DP-600 Concrete Repair, Self-Leveling, Grey (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 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:
Hazardous to the Aquatic Environment (Chronic), Category 3 - Aquatic Chronic 3; H412

For full text of H phrases, see Section 16.

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

For full text of R phrases, see Section 16.

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

HAZARD STATEMENTS:

H412	Harmful to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

Disposal:

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

SUPPLEMENTAL INFORMATION

Supplemental Hazard Statements:

EUH208	Contains Bis(1,2,2,6,6-pentamethyl-4-piperidyl)sebacate. | Poly(oxy-1,2-ethanediyl), α-[3-[3-(2H- benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4- hydroxyphenyl]-1-oxopropyl]-ω-hydroxy-. | Polymeric benzotriazole. | m-phenylenebis(methylamine). | Methyl(1,2,2,6,6-pentamethyl-4-piperidinyl)sebacate. May produce an allergic reaction.

94% of the mixture consists of components of unknown acute inhalation toxicity.

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

Symbol(s)

None.

Contains:

No ingredients are assigned to the label.

Risk phrases

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

Safety phrases

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

Special provisions concerning the labelling of certain substances
Contains Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate. m-phenylenebis(methylamine) Contains polymeric benzotriazole. Contains methyl(1,2,2,6,6-pentamethyl-4-piperidinyl)sebacate. May produce an allergic reaction.

2.3. Other hazards

None known.

SECTION 3: Composition/information on ingredients

Ingredient	CAS Nbr	EU Inventory	% by Wt	Classification
Glycerol poly(oxyethylene, oxypropylene) ether	9082-00-2		40 - 70	
Propylidynetrimethanol, propoxylated	25723-16-4	NLP 500-041-9	10 - 30	
1,1',1",1'"-Ethylenedinitrilotetrapropan-2-ol	102-60-3	EINECS 203-	10 - 30	

		041-4		
Dichlorodimethylsilane, reaction products with silica	68611-44-9	EINECS 271-893-4	1 - 5	
m-phenylenebis(methylamine)	1477-55-0	EINECS 216-032-5	0.1 - 1	T:R23; C:R35; Xn:R22; R43; R52/53 (Self Classified) Acute Tox. 3, H331; Acute Tox. 4, H302; Skin Corr. 1A, H314; Skin Sens. 1, H317; Aquatic Chronic 3, H412 (Self Classified)
Bis(1,2,2,6,6-pentamethyl-4-piperidyl)sebacate	41556-26-7	EINECS 255-437-1	0.1 - 1	N:R50/53; R43 (Self Classified) Skin Sens. 1, H317; Aquatic Acute 1, H400,M=1; Aquatic Chronic 1, H410,M=1 (Self Classified)
Poly(oxy-1,2-ethanediyl), α-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-ω-hydroxy-	104810-48-2		0.1 - 0.3	N:R51/53; R43 (EU) Skin Sens. 1, H317; Aquatic Chronic 2, H411 (CLP)
Titanium dioxide	13463-67-7	EINECS 236-675-5	0.1 - 0.3	
Polymeric benzotriazole	104810-47-1		0.1 - 0.3	N:R51/53; R43 (EU) Skin Sens. 1, H317; Aquatic Chronic 2, H411 (CLP)
Methyl(1,2,2,6,6-pentamethyl-4-piperidinyl)sebacate	82919-37-7	EINECS 280-060-4	0.05 - 0.2	N:R50/53; R43 (Self Classified) Skin Sens. 1, H317; Aquatic Acute 1, H400,M=1; Aquatic Chronic 1, H410,M=1 (Self Classified)

Please see section 16 for the full text of any R phrases and H statements referred to in this section
Please refer to section 15 for the any applicable Notas that have been applied to the above components

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

SECTION 4: First aid measures

4.1. Description of first aid measures

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

Skin contact
Immediately 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.

5.2. Special hazards arising from the substance or mixture
None inherent in this product.

Hazardous Decomposition or By-Products

Substance	Condition
Carbon monoxide.	During combustion.
Carbon dioxide.	During combustion.
Hydrogen Chloride	During combustion.
Oxides of nitrogen.	During combustion.

5.3. Advice for fire-fighters
No unusual fire or explosion hazards are anticipated.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapours, in accordance with good industrial hygiene practice. Warning: A motor could be an ignition source and could cause flammable gases or vapours in the spill area to burn or explode. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

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

6.3. Methods and material for containment and cleaning up
Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a 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. 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 handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after

handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Avoid contact with oxidising agents (eg. chlorine, chromic acid etc.) Use personal protective equipment (eg. gloves, respirators…) as required.

7.2. Conditions for safe storage including any incompatibilities
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
Titanium dioxide	13463-67-7	Health and Safety Comm. (UK)	TWA(Inhalable):10 mg/m3;TWA(respirable):4 mg/m³	
Silica, amorphous	68611-44-9	Health and Safety Comm. (UK)	TWA(as inhalable dust):6 mg/m3;TWA(as respirable dust):2.4 mg/m3	

Health and Safety Comm. (UK) : UK Health and Safety Commission
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
ppm: parts per million
mg/m³: milligrams per cubic metre
CEIL: Ceiling

8.2. Exposure controls

8.2.1. Engineering controls
Provide appropriate local exhaust ventilation for cutting, grinding, sanding or machining. 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

Eye protection not required.

Skin/hand protection

Wear protective gloves.
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: Butyl rubber.

Respiratory protection

Under normal use conditions, airborne exposures are not expected to be significant enough to require respiratory protection.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid.
Specific Physical Form:	Viscous.
Appearance/Odour	Slight ammonia like odour, grey.
Odour threshold	*No data available.*
pH	*Not applicable.*
Boiling point/boiling range	>=204.4 ºC
Melting point	*No data available.*
Flammability (solid, gas)	Not applicable.
Explosive properties	Not classified
Oxidising properties	Not classified
Flash point	>=143.3 ºC [*Test Method:*Tagliabue closed cup]
Autoignition temperature	*Not applicable.*
Flammable Limits(LEL)	*Not applicable.*
Flammable Limits(UEL)	*Not applicable.*
Vapour pressure	*Not applicable.*
Relative density	1.04
Water solubility	Negligible
Solubility- non-water	*No data available.*
Partition coefficient: n-octanol/water	*No data available.*
Evaporation rate	<=1 [*Ref Std:*WATER=1]
Vapour density	>=1 [*Ref Std:*AIR=1]
Decomposition temperature	*No data available.*
Viscosity	3.2 - 5.6 Pa-s
Density	1.04 g/ml

9.2. Other information

Hazardous air pollutants	0 % weight [*Test Method:*Calculated]
Volatile organic compounds (VOC)	0 g/l [*Details:*EU VOC content]
Percent volatile	0 % weight [*Test Method:*Estimated]
VOC less H2O & exempt solvents	< 10 g/l [*Test Method:*calculated SCAQMD rule 443.1] [*Details:*when used as intended with Part A]
VOC less H2O & exempt solvents	0 g/l [*Test Method:*calculated SCAQMD rule 443.1]

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

Substance	Condition
None known.	

SECTION 11: Toxicological information

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

11.1 Information on Toxicological effects

Signs and Symptoms of Exposure

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

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

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

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

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

Reproductive/Developmental Toxicity:
Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

Toxicological Data

Acute Toxicity

Name	Route	Species	Value
Overall product	Ingestion		Data not available or insufficient for classification; calculated ATE >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
Propylidynetrimethanol, propoxylated	Dermal	Rat	LD50 > 2,000 mg/kg
Propylidynetrimethanol,	Ingestion	Rat	LD50 > 2,500 mg/kg

propoxylated			
1,1',1",1'"-Ethylenedinitrilotetrapropan-2-ol	Dermal	Rabbit	LD50 > 2,000 mg/kg
1,1',1",1'"-Ethylenedinitrilotetrapropan-2-ol	Ingestion	Rat	LD50 3,280 mg/kg
Dichlorodimethylsilane, reaction products with silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
Dichlorodimethylsilane, reaction products with silica	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Dichlorodimethylsilane, reaction products with silica	Ingestion	Rat	LD50 > 5,110 mg/kg
m-phenylenebis(methylamine)	Dermal	Rabbit	LD50 > 2,000 mg/kg
m-phenylenebis(methylamine)	Inhalation-Dust/Mist (4 hours)	Rat	LC50 0.8 mg/l
m-phenylenebis(methylamine)	Ingestion	Rat	LD50 980 mg/kg
Bis(1,2,2,6,6-pentamethyl-4-piperidyl)sebacate	Ingestion	Rat	LD50 3,125 mg/kg
Poly(oxy-1,2-ethanediyl), α-[3-[3-(2H- benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4- hydroxyphenyl]-1-oxopropyl]-ω-hydroxy-	Dermal	Rat	LD50 > 2,000 mg/kg
Poly(oxy-1,2-ethanediyl), α-[3-[3-(2H- benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4- hydroxyphenyl]-1-oxopropyl]-ω-hydroxy-	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5.8 mg/l
Poly(oxy-1,2-ethanediyl), α-[3-[3-(2H- benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4- hydroxyphenyl]-1-oxopropyl]-ω-hydroxy-	Ingestion	Rat	LD50 > 2,000 mg/kg
Titanium dioxide	Dermal	Rabbit	LD50 > 10,000 mg/kg
Titanium dioxide	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 6.82 mg/l
Titanium dioxide	Ingestion	Rat	LD50 > 10,000 mg/kg
Polymeric benzotriazole	Dermal	Rat	LD50 > 2,000 mg/kg
Polymeric benzotriazole	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5.8 mg/l
Polymeric benzotriazole	Ingestion	Rat	LD50 > 2,000 mg/kg
Methyl(1,2,2,6,6-pentamethyl-4-piperidinyl)sebacate	Ingestion	Rat	LD50 3,125 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Glycerol poly(oxyethylene, oxypropylene) ether		Data not available or insufficient for classification
Propylidynetrimethanol, propoxylated		Data not available or insufficient for classification
1,1',1",1'"-Ethylenedinitrilotetrapropan-2-ol		Data not available or insufficient for classification
Dichlorodimethylsilane, reaction products with silica	Rabbit	No significant irritation
m-phenylenebis(methylamine)	Rat	Corrosive
Bis(1,2,2,6,6-pentamethyl-4-piperidyl)sebacate	Rabbit	No significant irritation
Poly(oxy-1,2-ethanediyl), α-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-ω-hydroxy-		Data not available or insufficient for classification
Titanium dioxide	Rabbit	No significant irritation
Polymeric benzotriazole		Data not available or insufficient for classification
Methyl(1,2,2,6,6-pentamethyl-4-	Rabbit	No significant irritation

piperidinyl)sebacate		

Serious Eye Damage/Irritation

Name	Species	Value
Glycerol poly(oxyethylene, oxypropylene) ether		Data not available or insufficient for classification
Propylidynetrimethanol, propoxylated		Data not available or insufficient for classification
1,1',1",1'"-Ethylenedinitrilotetrapropan-2-ol		Data not available or insufficient for classification
Dichlorodimethylsilane, reaction products with silica	Rabbit	No significant irritation
m-phenylenebis(methylamine)	Rabbit	Corrosive
Bis(1,2,2,6,6-pentamethyl-4-piperidyl)sebacate	Rabbit	No significant irritation
Poly(oxy-1,2-ethanediyl), α-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-ω-hydroxy-		Data not available or insufficient for classification
Titanium dioxide	Rabbit	No significant irritation
Polymeric benzotriazole		Data not available or insufficient for classification
Methyl(1,2,2,6,6-pentamethyl-4-piperidinyl)sebacate	Rabbit	No significant irritation

Skin Sensitisation

Name	Species	Value
Glycerol poly(oxyethylene, oxypropylene) ether		Data not available or insufficient for classification
Propylidynetrimethanol, propoxylated		Data not available or insufficient for classification
1,1',1",1'"-Ethylenedinitrilotetrapropan-2-ol		Data not available or insufficient for classification
Dichlorodimethylsilane, reaction products with silica	Human and animal	Not sensitizing
m-phenylenebis(methylamine)	Guinea pig	Sensitising
Bis(1,2,2,6,6-pentamethyl-4-piperidyl)sebacate	Guinea pig	Sensitising
Poly(oxy-1,2-ethanediyl), α-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-ω-hydroxy-		Data not available or insufficient for classification
Titanium dioxide	Human and animal	Not sensitizing
Polymeric benzotriazole		Data not available or insufficient for classification
Methyl(1,2,2,6,6-pentamethyl-4-piperidinyl)sebacate	Guinea pig	Sensitising

Respiratory Sensitisation

Name	Species	Value
Glycerol poly(oxyethylene, oxypropylene) ether		Data not available or insufficient for classification
Propylidynetrimethanol, propoxylated		Data not available or insufficient for classification
1,1',1",1'"-Ethylenedinitrilotetrapropan-2-ol		Data not available or insufficient for classification
Dichlorodimethylsilane, reaction products with silica		Data not available or insufficient for classification
m-phenylenebis(methylamine)		Data not available or insufficient for classification
Bis(1,2,2,6,6-pentamethyl-4-piperidyl)sebacate		Data not available or insufficient for classification
Poly(oxy-1,2-ethanediyl), α-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-		Data not available or insufficient for classification

hydroxyphenyl]-1-oxopropyl]-ω-hydroxy-		
Titanium dioxide		Data not available or insufficient for classification
Polymeric benzotriazole		Data not available or insufficient for classification
Methyl(1,2,2,6,6-pentamethyl-4-piperidinyl)sebacate		Data not available or insufficient for classification

Germ Cell Mutagenicity

Name	Route	Value
Glycerol poly(oxyethylene, oxypropylene) ether		Data not available or insufficient for classification
Propylidynetrimethanol, propoxylated		Data not available or insufficient for classification
1,1',1",1'"-Ethylenedinitrilotetrapropan-2-ol		Data not available or insufficient for classification
Dichlorodimethylsilane, reaction products with silica	In Vitro	Not mutagenic
m-phenylenebis(methylamine)	In Vitro	Not mutagenic
m-phenylenebis(methylamine)	In vivo	Not mutagenic
Bis(1,2,2,6,6-pentamethyl-4-piperidyl)sebacate	In Vitro	Not mutagenic
Poly(oxy-1,2-ethanediyl), α-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-ω-hydroxy-		Data not available or insufficient for classification
Titanium dioxide	In Vitro	Not mutagenic
Titanium dioxide	In vivo	Not mutagenic
Polymeric benzotriazole		Data not available or insufficient for classification
Methyl(1,2,2,6,6-pentamethyl-4-piperidinyl)sebacate	In Vitro	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Glycerol poly(oxyethylene, oxypropylene) ether			Data not available or insufficient for classification
Propylidynetrimethanol, propoxylated			Data not available or insufficient for classification
1,1',1",1'"-Ethylenedinitrilotetrapropan-2-ol			Data not available or insufficient for classification
Dichlorodimethylsilane, reaction products with silica	Not specified.	Mouse	Some positive data exist, but the data are not sufficient for classification
m-phenylenebis(methylamine)			Data not available or insufficient for classification
Bis(1,2,2,6,6-pentamethyl-4-piperidyl)sebacate			Data not available or insufficient for classification
Poly(oxy-1,2-ethanediyl), α-[3-[3-(2H- benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4- hydroxyphenyl]-1-oxopropyl]-ω-hydroxy-			Data not available or insufficient for classification
Titanium dioxide	Ingestion	Multiple animal species	Not carcinogenic
Titanium dioxide	Inhalation	Rat	Carcinogenic.
Polymeric benzotriazole			Data not available or insufficient for classification
Methyl(1,2,2,6,6-pentamethyl-4-piperidinyl)sebacate			Data not available or insufficient for classification

Reproductive Toxicity

Reproductive and/or Developmental Effects

3M Scotch-Weld DP-600 Concrete Repair, Self-Leveling, Grey (Part B)

Name	Route	Value	Species	Test result	Exposure Duration
Glycerol poly(oxyethylene, oxypropylene) ether		Data not available or insufficient for classification			
Propylidynetrimethanol, propoxylated		Data not available or insufficient for classification			
1,1',1",1'"-Ethylenedinitrilotetrapropan-2-ol		Data not available or insufficient for classification			
Dichlorodimethylsilane, reaction products with silica	Ingestion	Not toxic to female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Dichlorodimethylsilane, reaction products with silica	Ingestion	Not toxic to male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Dichlorodimethylsilane, reaction products with silica	Ingestion	Not toxic to development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
m-phenylenebis(methylamine)	Ingestion	Not toxic to female reproduction	Rat	NOAEL 450 mg/kg/day	1 generation
m-phenylenebis(methylamine)	Ingestion	Not toxic to male reproduction	Rat	NOAEL 450 mg/kg	1 generation
m-phenylenebis(methylamine)	Ingestion	Not toxic to development	Rat	NOAEL 450 mg/kg/day	1 generation
Bis(1,2,2,6,6-pentamethyl-4-piperidyl)sebacate		Data not available or insufficient for classification			
Poly(oxy-1,2-ethanediyl), α-[3-[3-(2H- benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-ω-hydroxy-		Data not available or insufficient for classification			
Titanium dioxide		Data not available or insufficient for classification			
Polymeric benzotriazole		Data not available or insufficient for classification			
Methyl(1,2,2,6,6-pentamethyl-4-piperidinyl)sebacate		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
Glycerol poly(oxyethylene, oxypropylene) ether			Data not available or insufficient for classification			
Propylidynetrimethanol,			Data not available or insufficient for			

propoxylated			classification			
1,1',1",1'"-Ethylenedinitrilotetrapropan-2-ol			Data not available or insufficient for classification			
Dichlorodimethylsilane, reaction products with silica			Data not available or insufficient for classification			
m-phenylenebis(methylamine)	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Not available	NOAEL Not avaliable	
Bis(1,2,2,6,6-pentamethyl-4-piperidyl)sebacate			Data not available or insufficient for classification			
Poly(oxy-1,2-ethanediyl), α-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-ω-hydroxy-			Data not available or insufficient for classification			
Polymeric benzotriazole			Data not available or insufficient for classification			
Methyl(1,2,2,6,6-pentamethyl-4-piperidinyl)sebacate			Data not available or insufficient for classification			

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Glycerol poly(oxyethylene, oxypropylene) ether			Data not available or insufficient for classification			
Propylidynetrimethanol, propoxylated			Data not available or insufficient for classification			
1,1',1",1'"-Ethylenedinitrilotetrapropan-2-ol			Data not available or insufficient for classification			
Dichlorodimethylsilane, reaction products with silica	Inhalation	respiratory system | silicosis	All data are negative	Human	NOAEL Not available	occupational exposure

m-phenylenebis(methylamine)	Ingestion	endocrine system | blood | bone marrow	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 600 mg/kg/day	28 days
Bis(1,2,2,6,6-pentamethyl-4-piperidyl)sebacate			Data not available or insufficient for classification			
Poly(oxy-1,2-ethanediyl), α-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-ω-hydroxy-			Data not available or insufficient for classification			
Titanium dioxide	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 0.010 mg/l	2 years
Titanium dioxide	Inhalation	pulmonary fibrosis	All data are negative	Human	NOAEL Not available	occupational exposure
Polymeric benzotriazole			Data not available or insufficient for classification			
Methyl(1,2,2,6,6-pentamethyl-4-piperidinyl)sebacate			Data not available or insufficient for classification			

Aspiration Hazard

Name	Value
Glycerol poly(oxyethylene, oxypropylene) ether	Not an aspiration hazard
Propylidynetrimethanol, propoxylated	Not an aspiration hazard
1,1',1",1'"-Ethylenedinitrilotetrapropan-2-ol	Not an aspiration hazard
Dichlorodimethylsilane, reaction products with silica	Not an aspiration hazard
m-phenylenebis(methylamine)	Not an aspiration hazard
Bis(1,2,2,6,6-pentamethyl-4-piperidyl)sebacate	Not an aspiration hazard
Poly(oxy-1,2-ethanediyl), α-[3-[3-(2H- benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4- hydroxyphenyl]-1-oxopropyl]-ω-hydroxy-	Not an aspiration hazard
Titanium dioxide	Not an aspiration hazard
Polymeric benzotriazole	Not an aspiration hazard
Methyl(1,2,2,6,6-pentamethyl-4-piperidinyl)sebacate	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
Bis(1,2,2,6,6-pentamethyl-4-piperidyl)sebacate	41556-26-7	Fathead minnow	Estimated	96 hours	LC50	0.36 mg/l
Dichlorodimethylsilane, reaction products with silica	68611-44-9	Water flea	Experimental	24 hours	EC50	>100 mg/l
Dichlorodimethylsilane, reaction products with silica	68611-44-9	Zebra Fish	Experimental	96 hours	LC50	>100 mg/l
Dichlorodimethylsilane, reaction products with silica	68611-44-9	Green algae	Experimental	72 hours	EC50	>100 mg/l
Glycerol poly(oxyethylene, oxypropylene) ether	9082-00-2	Inland Silverside	Estimated	96 hours	LC50	650 mg/l
Methyl(1,2,2,6,6-pentamethyl-4-piperidinyl)sebacate	82919-37-7	Water flea	Experimental	24 hours	EC50	20 mg/l
Methyl(1,2,2,6,6-pentamethyl-4-piperidinyl)sebacate	82919-37-7	Zebra Fish	Experimental	96 hours	LC50	0.57 mg/l
m-phenylenebis(methylamine)	1477-55-0	Ricefish	Experimental	96 hours	LC50	87.6 mg/l
m-phenylenebis(methylamine)	1477-55-0	Green Algae	Experimental	72 hours	EC50	28 mg/l
m-phenylenebis(methylamine)	1477-55-0	Water flea	Experimental	48 hours	EC50	15.2 mg/l
1,1',1",1'"-Ethylenedinitrilotetrapropan-	102-60-3	Green algae	Estimated	72 hours	EC50	>100 mg/l

2-ol						
1,1',1",1'"-Ethylenedinitrilotetrapropan-2-ol	102-60-3	Water flea	Estimated	48 hours	EC50	>500 mg/l
1,1',1",1'"-Ethylenedinitrilotetrapropan-2-ol	102-60-3	Fathead minnow	Experimental	96 hours	LC50	>1,000 mg/l
Poly(oxy-1,2-ethanediyl), α-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-ω-hydroxy-	104810-48-2	Rainbow trout	Unknown	96 hours	LC50	2.8 mg/l
Poly(oxy-1,2-ethanediyl), α-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-ω-hydroxy-	104810-48-2	Water flea	Unknown	48 hours	EC50	4 mg/l
Titanium dioxide	13463-67-7	Crustacea other	Experimental	96 hours	EC50	>300 mg/l
Titanium dioxide	13463-67-7	Water flea	Experimental	48 hours	EC50	>100 mg/l
Titanium dioxide	13463-67-7	Sheepshead Minnow	Experimental	96 hours	LC50	>240 mg/l
Dichlorodimethylsilane, reaction products with silica	68611-44-9	Green algae	Experimental	72 hours	NOEC	>100 mg/l
m-phenylenebis(methylamine)	1477-55-0	Green Algae	Experimental	72 hours	NOEC	9.8 mg/l
m-phenylenebis(methylamine)	1477-55-0	Water flea	Experimental	21 days	NOEC	4.7 mg/l
Titanium dioxide	13463-67-7	Fish	Experimental	30 days	NOEC	>=1,000 mg/l
Titanium dioxide	13463-67-7	Water flea	Experimental	30 days	NOEC	3 mg/l
Polymeric benzotriazole	104810-47-1		Data not available or insufficient for			% weight

			classification			
Propylidynetrimethanol, propoxylated	25723-16-4		Data not available or insufficient for classification			

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Bis(1,2,2,6,6-pentamethyl-4-piperidyl)sebacate	41556-26-7	Estimated Photolysis		Photolytic half-life (in air)	2.41 hours (t 1/2)	Other methods
m-phenylenebis(methylamine)	1477-55-0	Estimated Photolysis		Photolytic half-life (in air)	5.4 hours (t 1/2)	Other methods
Glycerol poly(oxyethylene, oxypropylene) ether	9082-00-2	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Titanium dioxide	13463-67-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Polymeric benzotriazole	104810-47-1	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
1,1',1",1'"-Ethylenedinitrilotetrapropan-2-ol	102-60-3	Experimental Biodegradation	28 days	BOD	1 % weight	OECD 301C - MITI test (I)
Propylidynetrimethanol, propoxylated	25723-16-4	Estimated Biodegradation	28 days	BOD	85 % weight	OECD 301F - Manometric respirometry
Dichlorodimethylsilane, reaction products with silica	68611-44-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Bis(1,2,2,6,6-pentamethyl-4-piperidyl)sebacate	41556-26-7	Estimated Biodegradation	28 days	BOD	32.8 % weight	OECD 301C - MITI test (I)
Poly(oxy-1,2-ethanediyl), α-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-ω-	104810-48-2	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

hydroxy-						
m-phenylenebis(methylamine)	1477-55-0	Experimental Biodegradation	28 days	CO2 evolution	49 % weight	OECD 301B - Modified sturm or CO2
Methyl(1,2,2,6,6-pentamethyl-4-piperidinyl)sebacate	82919-37-7	Experimental Biodegradation	28 days	Dissolv. Organic Carbon Deplet	38 % weight	OECD 301E - Modified OECD Scre

12.3 : Bioaccumulative potential

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Polymeric benzotriazole	104810-47-1	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Glycerol poly(oxyethylene, oxypropylene) ether	9082-00-2	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Dichlorodimethylsilane, reaction products with silica	68611-44-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Propylidynetrimethanol, propoxylated	25723-16-4	Estimated BCF - Fathead Mi		Bioaccumulation factor	1.9	Estimated: Bioconcentration factor
m-phenylenebis(methylamine)	1477-55-0	Experimental BCF-Carp	42 days	Bioaccumulation factor	<2.7	OECD 305E - Bioaccumulation flow-through fish test
Poly(oxy-1,2-ethanediyl), α-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-ω-hydroxy-	104810-48-2	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Bis(1,2,2,6,6-pentamethyl-4-piperidyl)sebacate	41556-26-7	Estimated Bioconcentration		Bioaccumulation factor	5.96	Estimated: Bioconcentration factor
Titanium dioxide	13463-67-7	Experimental BCF - Other	42 days	Bioaccumulation factor	9.6	Other methods
Methyl(1,2,2,6,6-pentamethyl-4-piperidinyl)sebacate	82919-37-7	Experimental Bioconcentration	56 days	Bioaccumulation factor	31	Other methods

1,1',1",1'"-Ethylenedinitrilotetrapropan-2-ol	102-60-3	Experimental Bioconcentration		Log Kow	0.27	Other methods
Methyl(1,2,2,6,6-pentamethyl-4-piperidinyl)sebacate	82919-37-7	Experimental Bioaccumulation		Log Kow	2.37	Other methods

12.4. Mobility in soil
Please contact manufacturer for more details

12.5. Results of the PBT and vPvB assessment

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

12.6. Other adverse effects
No information available.

SECTION 13: Disposal considerations

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

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

EU waste code (product as sold)
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: Not restricted for transport.
IMDG: Not restricted for transport.
IATA: Not restricted for transport.

SECTION 15: Regulatory information

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

Carcinogenicity

Ingredient	CAS Nbr	Classification	Regulation
Titanium dioxide	13463-67-7	Grp. 2B: Possible human carc.	International Agency for Research on Cancer

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

15.2. Chemical Safety Assessment
Not applicable

SECTION 16: Other information

List of relevant H statements

H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H331	Toxic if inhaled.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

List of relevant R-phrases

R22	Harmful if swallowed.
R23	Toxic by inhalation.
R35	Causes severe burns.
R43	May cause sensitisation by skin contact.
R50/53	Very toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.
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 16: List of relevant R phrase information was modified.
Section 3: Composition/ Information of ingredients table was modified.
Section 9: Flammability (solid, gas) information was modified.
Section 16: Regulations - Inventories - EU ONLY was modified.
Copyright was modified.
Section 8: Occupational exposure limit table was modified.
Aspiration Hazard Table was modified.
Section 11: Acute Toxicity table was modified.
Carcinogenicity Table was modified.
Serious Eye Damage/Irritation Table was modified.
Germ Cell Mutagenicity Table was modified.
Skin Sensitisation Table was modified.

Respiratory Sensitisation Table was modified.
Reproductive Toxicity Table was modified.
Skin Corrosion/Irritation Table was modified.
Target Organs - Repeated Table was modified.
Target Organs - Single Table was modified.
Section 5: Fire - Extinguishing media information was modified.
Section 6: Accidental release clean-up information was modified.
Section 13: Standard Phrase Category Waste GHS was modified.
Two-column table displaying the unique list of H Codes and statements (std phrases) for all components of the given material. was modified.
Section 8: Skin protection - protective clothing text was added.
Section 2: Indication of danger heading was added.
Section 2: Indication of danger information was added.
Section 12: Component ecotoxicity information was added.
Section 12: Persistence and Degradability information was added.
Section 12:Bioccumulative potential information was added.
Section 12: Component Ecotoxicity table Material column header was added.
Section 12: Component Ecotoxicity table CAS No column header was added.
Section 12: Component Ecotoxicity table Organism column header was added.
Section 12: Component Ecotoxicity table Type column header was added.
Section 12: Component Ecotoxicity table Exposure column header was added.
Section 12: Component Ecotoxicity table End point column header was added.
Section 12: Component Ecotoxicity table Result column header was added.
Section 12: Persistence and degradability table Material column header was added.
Section 12: Persistence and degradability table CAS No column header was added.
Section 12: Persistence and degradability table Test Type column header was added.
Section 12: Persistence and degradability table Duration column header was added.
Section 12: Persistence and degradability table Test Result column header was added.
Section 12: Persistence and degradability table Protocol column header was added.
Section 12:Bioccumulative potential table Material column header was added.
Section 12:Bioccumulative potential table CAS No column header was added.
Section 12:Bioccumulative potential table CAS No column header was added.
Section 12:Bioccumulative potential table Test Result column header was added.
Section 12:Bioccumulative potential table Protocol column header was added.
Section 12:Bioccumulative potential table Test Type column header was added.
Label: CLP Classification - Header was added.
Label: CLP Classification was added.
Label: CLP Classification - Header was added.
Label: CLP Percent Unknown was added.
Label: CLP Environmental Hazard Statements was added.
Label: CLP Precautionary - Disposal was added.
Label: CLP Precautionary - Disposal - Header was added.
Label: Precautionary Statement - Header was added.
Label: CLP Supplemental Hazard Statements - Header was added.
Label: CLP Supplemental Information - Header was added.
Contains statement for sensitizers was added.
Contains statement for sensitizers was added.
Contains statement for sensitizers was added.
Section 2: 2.2 & 2.3. CLP REGULATION heading was added.
Section 12: Persistence and degradability table Study Type column header was added.
Section 12:Bioccumulative potential table Test Type column header was added.
Section 9: Odour Threshold was added.
Section 9: Solubility (non-water) was added.
Section 09: Decomposition Temperature was added.
Section 2: H phrase reference was added.
Section 2: R phrase reference was added.

Label: Graphic was added.
List of sensitizers was added.
Section 02: Graphic information was added.
Section 9: Flammability (solid, gas) information was added.
Section 2: Symbols heading was deleted.
Section 15: Symbol information was deleted.
Section 12: Acute aquatic hazard information was deleted.
Section 12: Chronic aquatic hazard heading was deleted.
Section 12: Acute aquatic hazard heading was deleted.
Section 12: Chronic aquatic hazard information was deleted.
Prints No Data if Component ecotoxicity information is not present was deleted.
Prints No Data if Persistence and Degradability information is not present was deleted.
Prints No Data if Bioccumulative potential information is not present was deleted.
Section 11: UN GHS Classification table heading 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