



## Safety Data Sheet

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<b>Document group:</b>	22-2293-3	<b>Version number:</b>	8.00
<b>Revision date:</b>	15/08/2013	<b>Supersedes date:</b>	19/11/2012
<b>Transportation version number:</b>	1.00 (12/08/2011)		

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™ 55045 Superfast Plastic Adhesive

#### Product identification numbers

FS-9100-4549-1

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

Automotive.

#### 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:**

22-1877-4, 22-1822-0

### TRANSPORTATION INFORMATION

FS-9100-4549-1

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

**PRECAUTIONARY STATEMENTS**

**General:**

- P102 Keep out of reach of children.
- P101 If medical advice is needed, have product container or label at hand.

**Prevention:**

- P260 Do not breathe dust/fume/gas/mist/vapours/spray.
- P271 Use only outdoors or in a well-ventilated area.
- P285 In case of inadequate ventilation wear respiratory protection.
- P280E Wear protective gloves.

**Response:**

- P304 + P340 IF INHALED: Remove person to fresh air and keep 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.

**Storage:**

- P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
- P405 Store locked up.

**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.

**Safety phrases**

S22 Do not breathe dust.  
S23A Do not breathe vapour.  
S36/37 Wear suitable protective clothing and gloves.  
S63 In case of accident by inhalation: remove casualty to fresh air and keep at rest.  
S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).  
S2 Keep out of the reach of children.

**Special provisions concerning the labelling of certain substances**

Contains isocyanates. See information supplied by manufacturer.

**Revision information:**

Revision Changes:  
Kit: Component document group number(s) information was modified.  
Copyright information was modified.  
Label: Signal Word - Header information was added.  
Label: Signal Word information was added.  
Label: CLP Classification information was added.  
Label: CLP Classification - Header information was added.  
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 - Disposal information was added.  
Label: CLP Precautionary - Disposal - Header information was added.  
Label: CLP Precautionary - General information was added.  
Label: CLP Precautionary - General - Header information was added.  
Label: CLP Precautionary - Prevention information was added.  
Label: CLP Precautionary - Prevention - Header information was added.  
Label: CLP Precautionary - Response information was added.  
Label: CLP Precautionary - Response - Header information was added.

Label: CLP Precautionary - Storage information was added.

Label: CLP Precautionary - Storage - Header information was added.

Label: Precautionary Statement - Header information was added.

Label: CLP Supplemental Hazard Statements information was added.

Label: CLP Supplemental Hazard Statements - Header information was added.

Label: CLP Supplemental Information - Header information was added.

Section 2: 2.2 & 2.3. CLP REGULATION heading information was added.



## Safety Data Sheet

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<b>Document group:</b>	22-1822-0	<b>Version number:</b>	10.00
<b>Revision date:</b>	10/09/2013	<b>Supersedes date:</b>	09/08/2013
<b>Transportation version number:</b>	1.00 (12/08/2011)		

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™ 55045 Superfast Plastic Adhesive (Part A)

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

##### Identified uses

Automotive.

#### 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	5 - 25
Triethoxy(3-isocyanatopropyl)silane	24801-88-5	0.1 - 1

**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**

**General:**

P102	Keep out of reach of children.
P101	If medical advice is needed, have product container or label at hand.

**Prevention:**

P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P271	Use only outdoors or in a well-ventilated area.
P284A	In case of inadequate ventilation wear respiratory protection.
P280E	Wear protective gloves.

**Response:**

P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P342 + P311	If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

## 3M™ 55045 Superfast Plastic Adhesive (Part A)

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.

### Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.  
P405 Store locked up.

### 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.

56% of the mixture consists of components of unknown acute oral toxicity.

39% of the mixture consists of components of unknown acute inhalation toxicity.

Contains 41% 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.  
S63 In case of accident by inhalation: remove casualty to fresh air and keep at rest.  
S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).  
S2 Keep out of the reach of children.

### Special provisions concerning the labelling of certain substances

Contains isocyanates. See information supplied by manufacturer.

**3M™ 55045 Superfast Plastic Adhesive (Part A)****2.3. Other hazards**

Persons previously sensitized to isocyanates may develop a cross-sensitization reaction to other isocyanates.

**SECTION 3: Composition/information on ingredients**

<b>Ingredient</b>	<b>CAS Nbr</b>	<b>EU Inventory</b>	<b>% by Wt</b>	<b>Classification</b>
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'- methylenebis[4-isocyanatobenzene]	68424-09-9		15 - 40	
4,4'-Methylenediphenyl diisocyanate, oligomers	25686-28-6	NLP 500-040-3	5 - 25	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)
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	2530-83-8	EINECS 219-784-2	1 - 5	Xi:R41 (Self Classified)  Eye Dam. 1, H318 (Self Classified)
Triethoxy(3-isocyanatopropyl)silane	24801-88-5	EINECS 246-467-6	0.1 - 1	T+:R26; C:R34; Xn:R21-22; R42-43 (Self Classified)  Acute Tox. 1, H330; Acute Tox. 4, H312; Acute Tox. 4, H302; Skin Corr. 1B, H314; Resp. Sens. 1, H334; Skin Sens. 1, H317 (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**

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**

Carbon monoxide.  
Carbon dioxide.  
Hydrogen cyanide.  
Oxides of nitrogen.  
Toxic vapour, gas, particulate.

**Condition**

During combustion.  
During combustion.  
During combustion.  
During combustion.  
During combustion.

**5.3. Advice for fire-fighters**

No unusual fire or explosion hazards are anticipated.

**SECTION 6: Accidental release measures**

**6.1. Personal precautions, protective equipment and emergency procedures**

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

**6.2. Environmental precautions**

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

**6.3. Methods and material for containment and cleaning up**

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

**6.4. Reference to other sections**

Refer to Section 8 and Section 13 for more information

**SECTION 7: Handling and storage****7.1. Precautions for safe handling**

Do not use in a confined area or areas with little or no air movement. 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.

**7.2. Conditions for safe storage including any incompatibilities**

Store in a well-ventilated place. Keep container tightly closed to prevent contamination with water or air. If contamination is suspected, do not reseal container. Store away from acids. Store away from strong bases.

**7.3. Specific end use(s)**

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

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

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/m <sup>3</sup> ;STEL(as NCO):0.07 mg/m <sup>3</sup>	Respiratory Sensitizer

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

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

ppm: parts per million

mg/m<sup>3</sup>: 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/cm <sup>2</sup>
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/m <sup>3</sup>
4,4'-methylenediphenyl diisocyanate		Worker	Inhalation, Long-term exposure (8 hours), Systemic effects	0.05 mg/m <sup>3</sup>
4,4'-methylenediphenyl diisocyanate		Worker	Inhalation, Short-term exposure, Local effects	0.1 mg/m <sup>3</sup>
4,4'-methylenediphenyl diisocyanate		Worker	Inhalation, Short-term exposure, Systemic effects	0.1 mg/m <sup>3</sup>

## 3M™ 55045 Superfast Plastic Adhesive (Part A)

### 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

### 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

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.

## 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, clear.
Odour threshold	<i>No data available.</i>
pH	<i>Not applicable.</i>

## 3M™ 55045 Superfast Plastic Adhesive (Part A)

<b>Boiling point/boiling range</b>	$\geq 204.4$ °C
<b>Melting point</b>	<i>No data available.</i>
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Explosive properties</b>	Not classified
<b>Oxidising properties</b>	Not classified
<b>Flash point</b>	$\geq 143.3$ °C [ <i>Test Method</i> : Tagliabue closed cup]
<b>Autoignition temperature</b>	<i>Not applicable.</i>
<b>Flammable Limits(LEL)</b>	<i>Not applicable.</i>
<b>Flammable Limits(UEL)</b>	<i>Not applicable.</i>
<b>Vapour pressure</b>	$\leq 0$ Pa [ <i>@ 20 °C</i> ]
<b>Relative density</b>	1.1 [ <i>Ref Std</i> : WATER=1]
<b>Water solubility</b>	Negligible
<b>Solubility- non-water</b>	<i>No data available.</i>
<b>Partition coefficient: n-octanol/water</b>	<i>No data available.</i>
<b>Evaporation rate</b>	$\leq 1$ [ <i>Details</i> : Gels with exposure to humidity.]
<b>Vapour density</b>	$\geq 1$ [ <i>Ref Std</i> : AIR=1]
<b>Decomposition temperature</b>	<i>No data available.</i>
<b>Viscosity</b>	1 - 2 Pa-s
<b>Density</b>	1.1 g/ml

### 9.2. Other information

<b>Hazardous air pollutants</b>	40.877 % weight [ <i>Test Method</i> : Calculated]
<b>Volatile organic compounds (VOC)</b>	22 g/l [ <i>Test Method</i> : calculated SCAQMD rule 443.1]
<b>Volatile organic compounds (VOC)</b>	2.0 % weight [ <i>Test Method</i> : calculated per CARB title 2]
<b>Percent volatile</b>	2.0 % weight [ <i>Test Method</i> : Estimated]
<b>VOC less H<sub>2</sub>O &amp; exempt solvents</b>	22 g/l [ <i>Test Method</i> : 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

Water

Strong acids.

Strong bases.

### 10.6 Hazardous decomposition products

#### Substance

None known.

#### Condition

Refer to section 5.2 for hazardous decomposition products during combustion.

## SECTION 11: Toxicological information

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

### 11.1 Information on Toxicological effects

#### Signs and Symptoms of Exposure

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

#### Inhalation

Harmful if inhaled. Respiratory tract irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. Allergic respiratory reaction: Signs/symptoms may include difficulty breathing, wheezing, cough, and tightness of chest. May cause 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.

#### Ingestion

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

#### Target Organ Effects:

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

#### 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.

#### 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	Dermal		Data not available or insufficient for classification; calculated ATE >5,000 mg/kg
Overall product	Inhalation-Vapor(4 hr)		Data not available or insufficient for classification; calculated ATE 11.6 mg/l
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

**3M™ 55045 Superfast Plastic Adhesive (Part A)**

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
Castor oil, polymer with 1,1'-methylenebis[4-isocyanatobenzene]			Data not available or insufficient for classification
4,4'-Methylenediphenyl diisocyanate, oligomers			Data not available or insufficient for classification
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	Dermal	Rabbit	LD50 4,000 mg/kg
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5.3 mg/l
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	Ingestion	Rat	LD50 7,010 mg/kg
Triethoxy(3-isocyanatopropyl)silane	Dermal	Rabbit	LD50 1,259 mg/kg
Triethoxy(3-isocyanatopropyl)silane	Inhalation-Vapor (4 hours)	Rat	LC50 0.36 mg/l
Triethoxy(3-isocyanatopropyl)silane	Ingestion	Rat	LD50 706 mg/kg

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

Name	Species	Value
4,4'-methylenediphenyl diisocyanate	official classification	Irritant
Castor oil, polymer with 1,1'-methylenebis[4-isocyanatobenzene]		Data not available or insufficient for classification
4,4'-Methylenediphenyl diisocyanate, oligomers		Data not available or insufficient for classification
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	Rabbit	Mild irritant
Triethoxy(3-isocyanatopropyl)silane	Rabbit	Corrosive

**Serious Eye Damage/Irritation**

Name	Species	Value
4,4'-methylenediphenyl diisocyanate	official classification	Severe irritant
Castor oil, polymer with 1,1'-methylenebis[4-isocyanatobenzene]		Data not available or insufficient for classification
4,4'-Methylenediphenyl diisocyanate, oligomers		Data not available or insufficient for classification
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	Rabbit	Corrosive
Triethoxy(3-isocyanatopropyl)silane	Rabbit	Corrosive

**Skin Sensitisation**

Name	Species	Value
4,4'-methylenediphenyl diisocyanate	official classification	Sensitising
Castor oil, polymer with 1,1'-methylenebis[4-isocyanatobenzene]		Data not available or insufficient for classification
4,4'-Methylenediphenyl diisocyanate, oligomers		Data not available or insufficient for classification
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	Guinea pig	Some positive data exist, but the data are not sufficient for classification
Triethoxy(3-isocyanatopropyl)silane	similar compounds	Sensitising

**Respiratory Sensitisation**

Name	Species	Value
4,4'-methylenediphenyl diisocyanate	Human	Sensitising
Castor oil, polymer with 1,1'-methylenebis[4-isocyanatobenzene]		Data not available or insufficient for classification
4,4'-Methylenediphenyl diisocyanate, oligomers		Data not available or insufficient for classification
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane		Data not available or insufficient for classification

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Triethoxy(3-isocyanatopropyl)silane	similar compounds	Sensitising
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**Germ Cell Mutagenicity**

Name	Route	Value
4,4'-methylenediphenyl diisocyanate	In Vitro	Some positive data exist, but the data are not sufficient for classification
Castor oil, polymer with 1,1'-methylenebis[4-isocyanatobenzene]		Data not available or insufficient for classification
4,4'-Methylenediphenyl diisocyanate, oligomers		Data not available or insufficient for classification
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	In vivo	Not mutagenic
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	In Vitro	Some positive data exist, but the data are not sufficient for classification
Triethoxy(3-isocyanatopropyl)silane		Data not available or insufficient for classification

**Carcinogenicity**

Name	Route	Species	Value
4,4'-methylenediphenyl diisocyanate	Inhalation	Rat	Some positive data exist, but the data are not sufficient for classification
Castor oil, polymer with 1,1'-methylenebis[4-isocyanatobenzene]			Data not available or insufficient for classification
4,4'-Methylenediphenyl diisocyanate, oligomers			Data not available or insufficient for classification
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	Dermal	Mouse	Not carcinogenic
Triethoxy(3-isocyanatopropyl)silane			Data not available or insufficient 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 not sufficient for classification	Rat	NOAEL 0.004 mg/l	during organogenesis
Castor oil, polymer with 1,1'-methylenebis[4-isocyanatobenzene]		Data not available or insufficient for classification			
4,4'-Methylenediphenyl diisocyanate, oligomers		Data not available or insufficient for classification			
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	Ingestion	Not toxic to female reproduction	Rat	NOAEL 1,000 mg/kg/day	1 generation
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	Ingestion	Not toxic to male reproduction	Rat	NOAEL 1,000 mg/kg/day	1 generation
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	Ingestion	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 3,000 mg/kg/day	during organogenesis
Triethoxy(3-isocyanatopropyl)silane		Data not available or insufficient for classification			

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**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	
Castor oil, polymer with 1,1'-methylenebis[4-isocyanatobenzene]			Data not available or insufficient for classification			
4,4'-Methylenediphenyl diisocyanate, oligomers			Data not available or insufficient for classification			
Triethoxy(3-isocyanatopropyl)silane			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
Castor oil, polymer with 1,1'-methylenebis[4-isocyanatobenzene]			Data not available or insufficient for classification			
4,4'-Methylenediphenyl diisocyanate, oligomers			Data not available or insufficient for classification			
[3-(2,3-Epoxypropoxy)propyl]trimethoxysilane	Ingestion	heart   endocrine system   bone, teeth, nails, and/or hair   hematopoietic system   liver   immune system   nervous system   kidney and/or bladder   respiratory system	All data are negative	Rat	NOAEL 1,000 mg/kg/day	28 days
Triethoxy(3-isocyanatopropyl)silane			Data not available or insufficient for classification			



**3M™ 55045 Superfast Plastic Adhesive (Part A)****Aspiration Hazard**

Name	Value
4,4'-methylenediphenyl diisocyanate	Not an aspiration hazard
Castor oil, polymer with 1,1'-methylenebis[4-isocyanatobenzene]	Not an aspiration hazard
4,4'-Methylenediphenyl diisocyanate, oligomers	Not an aspiration hazard
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	Not an aspiration hazard
Triethoxy(3-isocyanatopropyl)silane	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
Castor oil, polymer with 1,1'-methylenebis[4-isocyanatobenzene]	68424-09-9		Data not available or insufficient for classification			
Triethoxy(3-isocyanatopropyl)silane	24801-88-5	Water flea	Experimental	48 hours	EC50	331 mg/l
Triethoxy(3-isocyanatopropyl)silane	24801-88-5	Green algae	Experimental	72 hours	EC50	603 mg/l
Triethoxy(3-isocyanatopropyl)silane	24801-88-5	Green algae	Experimental	72 hours	Effect Concentration 10%	321 mg/l
4,4'-Methylenediphenyl diisocyanate, oligomers	25686-28-6	Zebra Fish	Estimated	24 hours	LC50	>100 mg/l
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	2530-83-8	Water flea	Experimental	48 hours	EC50	473 mg/l
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	2530-83-8	Green algae	Experimental	96 hours	EC50	350 mg/l

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ne						
[3-(2,3-Epoxypropoxy)propyl]trimethoxysilane	2530-83-8	Common Carp	Experimental	96 hours	LC50	55 mg/l
[3-(2,3-Epoxypropoxy)propyl]trimethoxysilane	2530-83-8	Water flea	Experimental	21 days	NOEC	>=100 mg/l
[3-(2,3-Epoxypropoxy)propyl]trimethoxysilane	2530-83-8	Green algae	Experimental	96 hours	NOEC	130 mg/l
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
Triethoxy(3-isocyanatopropyl)silane	24801-88-5	Estimated Photolysis		Photolytic half-life (in air)	8.6 days (t 1/2)	Other methods
4,4'-methylenediphenyl diisocyanate	101-68-8	Estimated Photolysis		Photolytic half-life (in air)	2.4 days (t 1/2)	Other methods
[3-(2,3-Epoxypropoxy)propyl]trimethoxysilane	2530-83-8	Modeled Photolysis		Photolytic half-life (in air)	1.2 days (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
Triethoxy(3-isocyanatopropyl)silane	24801-88-5	Experimental Biodegradation	28 days	BOD	54 % weight	OECD 301C - MITI test (I)
4,4'-Methylenediphenyl diisocyanate, oligomers	25686-28-6	Estimated Hydrolysis		Hydrolytic half-life	<2 hours (t 1/2)	Other methods
4,4'-Methylenediphenyl diisocyanate,	25686-28-6	Estimated Biodegradation	28 days	BOD	0 % weight	OECD 301C - MITI test (I)

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oligomers						
[3-(2,3-Epoxypropoxy)propyl]trimethoxysilane	2530-83-8	Experimental Hydrolysis		Hydrolytic half-life	6.5 hours (t <sub>1/2</sub> )	Other methods
4,4'-methylenediphenyl diisocyanate	101-68-8	Experimental Hydrolysis		Hydrolytic half-life	<2 hours (t <sub>1/2</sub> )	Other methods
[3-(2,3-Epoxypropoxy)propyl]trimethoxysilane	2530-83-8	Experimental Biodegradation	28 days	Dissolv. Organic Carbon Deplet	37 % weight	Other methods
4,4'-methylenediphenyl diisocyanate	101-68-8	Experimental Biodegradation	28 days	BOD	0 % weight	OECD 301C - MITI test (I)

**12.3 : Bioaccumulative potential**

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
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 BCF-Carp	28 days	Bioaccumulation factor	200	Other methods
[3-(2,3-Epoxypropoxy)propyl]trimethoxysilane	2530-83-8	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Triethoxy(3-isocyanatopropyl)silane	24801-88-5	Experimental BCF-Carp	28 days	Bioaccumulation factor	<5.4	Other methods
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

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/IMDG/IATA: Not restricted for transport.

## SECTION 15: Regulatory information

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

#### Carcinogenicity

<u>Ingredient</u>	<u>CAS Nbr</u>	<u>Classification</u>	<u>Regulation</u>
4,4'-Methylenediphenyl diisocyanate, oligomers	25686-28-6	Carc. 2	Vendor classified according to Regulation (EC) No 1272/2008
4,4'-Methylenediphenyl diisocyanate, oligomers	25686-28-6	Carc.Cat.3	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

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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 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

H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure.

### List of relevant R-phrases

R20	Harmful by inhalation.
R21	Harmful in contact with skin.
R22	Harmful if swallowed.
R26	Very toxic by inhalation.
R34	Causes burns.
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.
R41	Risk of serious damage to eyes.
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:

Label: CLP Precautionary - Prevention information was modified.

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

Section 10: Hazardous decomposition products during combustion text information was added.

DISCLAIMER: The information on this Safety Data Sheet is based on our experience and is correct to the best of our knowledge at the date of publication, but we do not accept any liability for any loss, damage or injury resulting from its use

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(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](http://www.3M.com/uk)**



## Safety Data Sheet

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<b>Document group:</b>	22-1877-4	<b>Version number:</b>	8.00
<b>Revision date:</b>	15/08/2013	<b>Supersedes date:</b>	11/02/2013
<b>Transportation version number:</b>	1.00 (12/08/2011)		

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™ Superfast Plastic Adhesive PN 55045 Accelerator (Part B)

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

##### Identified uses

Automotive.

#### 1.3. Details of the supplier of the substance or mixture

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

**E Mail:** tox.uk@mmm.com

**Website:** www.3M.com/uk

#### 1.4. Emergency telephone number

+44 (0)1344 858 000

### SECTION 2: Hazard identification

#### 2.1. Classification of the substance or mixture

CLP REGULATION (EC) No 1272/2008

##### CLASSIFICATION:

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

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

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

For full text of H phrases, see Section 16.

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

##### Indication of danger

Irritant; Xi; R36/38

Sensitizing; R43

For full text of R phrases, see Section 16.

## 2.2. Label elements

### CLP REGULATION (EC) No 1272/2008

#### SIGNAL WORD

WARNING!

#### Symbols:

GHS07 (Exclamation mark) |

#### Pictograms



Ingredient  
m-phenylenebis(methylamine)

CAS Nbr  
1477-55-0

% by Wt  
1 - 5

#### HAZARD STATEMENTS:

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

#### PRECAUTIONARY STATEMENTS

##### General:

P102 Keep out of reach of children.  
P101 If medical advice is needed, have product container or label at hand.

##### Prevention:

P280E Wear protective gloves.

##### Response:

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.

##### Disposal:

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

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

#### Symbol(s)



Irritant

#### Contains:

m-phenylenebis(methylamine)

#### Risk phrases



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R36/38 Irritating to eyes and skin.  
R43 May cause sensitisation by skin contact.

### Safety phrases

S24 Avoid contact with skin.  
S37 Wear suitable gloves.  
S46 If swallowed, seek medical advice immediately and show this container or label.  
S2 Keep out of the reach of children.

### 2.3. Other hazards

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

## SECTION 3: Composition/information on ingredients

Ingredient	CAS Nbr	EU Inventory	% by Wt	Classification
Glycerol poly(oxyethylene, oxypropylene) ether	9082-00-2		40 - 70	
1,1',1'',1'''-Ethylenedinitrilotetrapropan-2-ol	102-60-3	EINECS 203-041-4	10 - 30	
Propylidynetrimethanol, propoxylated	25723-16-4	NLP 500-041-9	10 - 30	
m-phenylenebis(methylamine)	1477-55-0	EINECS 216-032-5	1 - 5	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)
Bismuth(3+) neodecanoate	34364-26-6	EINECS 251-964-6	0.1 - 1.0	

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.

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### 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 dry chemical extinguisher to extinguish.

### 5.2. Special hazards arising from the substance or mixture

None inherent in this product.

### Hazardous Decomposition or By-Products

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

### 5.3. Advice for fire-fighters

No unusual fire or explosion hazards are anticipated.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

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

### 6.2. Environmental precautions

Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a 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

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

### 7.2. Conditions for safe storage including any incompatibilities

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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

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

### 8.2. Exposure controls

#### 8.2.1. Engineering controls

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

Wear eye/face protection.

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

##### Skin/hand protection

Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials. Gloves made from the following material(s) are recommended: Butyl 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.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	Liquid.
Specific Physical Form:	Gel
Appearance/Odour	Slight ammonia like odour, clear.
Odour threshold	<i>No data available.</i>
pH	<i>Not applicable.</i>
Boiling point/boiling range	$\geq 204.4$ °C
Melting point	<i>No data available.</i>
Flammability (solid, gas)	Not applicable.

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<b>Explosive properties</b>	Not classified
<b>Oxidising properties</b>	Not classified
<b>Flash point</b>	>=143.3 °C [ <i>Test Method</i> :Tagliabue closed cup]
<b>Autoignition temperature</b>	<i>Not applicable.</i>
<b>Flammable Limits(LEL)</b>	<i>Not applicable.</i>
<b>Flammable Limits(UEL)</b>	<i>Not applicable.</i>
<b>Vapour pressure</b>	<i>Not applicable.</i>
<b>Relative density</b>	1.02 [ <i>Ref Std</i> :WATER=1]
<b>Water solubility</b>	Negligible
<b>Solubility- non-water</b>	<i>No data available.</i>
<b>Partition coefficient: n-octanol/water</b>	<i>No data available.</i>
<b>Evaporation rate</b>	<=1 [ <i>Ref Std</i> :WATER=1]
<b>Vapour density</b>	>=1 [ <i>Ref Std</i> :AIR=1]
<b>Decomposition temperature</b>	<i>No data available.</i>
<b>Viscosity</b>	1.3 - 2 Pa-s
<b>Density</b>	1.02 g/ml

### 9.2. Other information

<b>Hazardous air pollutants</b>	0 lb HAPS/gal [ <i>Test Method</i> :Calculated]
<b>Volatile organic compounds (VOC)</b>	0 % weight [ <i>Test Method</i> :calculated per CARB title 2]
<b>Volatile organic compounds (VOC)</b>	0 g/l [ <i>Test Method</i> :calculated SCAQMD rule 443.1]
<b>Percent volatile</b>	<=1 % weight [ <i>Test Method</i> :Estimated]
<b>VOC less H2O &amp; exempt solvents</b>	0 g/l [ <i>Test Method</i> :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

<u>Substance</u>	<u>Condition</u>
None known.	

Refer to section 5.2 for hazardous decomposition products during combustion.

## SECTION 11: Toxicological information

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

### 11.1 Information on Toxicological effects

#### Signs and Symptoms of Exposure

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

##### Inhalation

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

##### 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.

##### Ingestion

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

##### Additional information:

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

#### Toxicological Data

##### Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		Data not available or insufficient for classification; calculated ATE >5,000 mg/kg
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, propoxylated	Ingestion	Rat	LD50 > 2,500 mg/kg
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
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

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Bismuth(3+) neodecanoate		Data not available or insufficient for classification
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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
m-phenylenebis(methylamine)	Rat	Corrosive
Bismuth(3+) neodecanoate		Data not available or insufficient for classification

**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
m-phenylenebis(methylamine)	Rabbit	Corrosive
Bismuth(3+) neodecanoate		Data not available or insufficient for classification

**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
m-phenylenebis(methylamine)	Guinea pig	Sensitising
Bismuth(3+) neodecanoate		Data not available or insufficient for classification

**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
m-phenylenebis(methylamine)		Data not available or insufficient for classification
Bismuth(3+) neodecanoate		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

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1,1',1",1'''-Ethylenedinitrilotetrapropan-2-ol		Data not available or insufficient for classification
m-phenylenebis(methylamine)	In Vitro	Not mutagenic
m-phenylenebis(methylamine)	In vivo	Not mutagenic
Bismuth(3+) neodecanoate		Data not available or insufficient for classification

**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
m-phenylenebis(methylamine)			Data not available or insufficient for classification
Bismuth(3+) neodecanoate			Data not available or insufficient for classification

**Reproductive Toxicity**

**Reproductive and/or Developmental Effects**

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			
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
Bismuth(3+) neodecanoate		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, propoxylated			Data not available or insufficient for classification			
1,1',1",1'''-			Data not available			

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Ethylenedinitrilotetrapropan-2-ol			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 available	
Bismuth(3+) neodecanoate			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			
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
Bismuth(3+) neodecanoate			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
m-phenylenebis(methylamine)	Not an aspiration hazard
Bismuth(3+) neodecanoate	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.



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Material	CAS Nbr	Organism	Type	Exposure	Test endpoint	Test result
1,1',1'',1'''- Ethylenedinitri lotetrapropan- 2-ol	102-60-3	Water flea	Estimated	48 hours	EC50	>500 mg/l
1,1',1'',1'''- Ethylenedinitri lotetrapropan- 2-ol	102-60-3	Green algae	Estimated	72 hours	EC50	>100 mg/l
1,1',1'',1'''- Ethylenedinitri lotetrapropan- 2-ol	102-60-3	Fathead minnow	Experimental	96 hours	LC50	>1,000 mg/l
Bismuth(3+) neodecanoate	34364-26-6		Data not available or insufficient for classification			
Glycerol poly(oxyethyle ne, oxypropylene) ether	9082-00-2	Inland Silverside	Estimated	96 hours	LC50	650 mg/l
Propylidynetri methanol, propoxylated	25723-16-4		Data not available or insufficient for classification			
m- phenylenebis( methylamine)	1477-55-0	Water flea	Experimental	21 days	NOEC	4.7 mg/l
m- phenylenebis( methylamine)	1477-55-0	Green Algae	Experimental	72 hours	NOEC	9.8 mg/l
m- phenylenebis( methylamine)	1477-55-0	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

**12.2. Persistence and degradability**

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
1,1',1'',1'''- Ethylenedinitri lotetrapropan- 2-ol	102-60-3	Experimental Biodegradation	28 days	BOD	1 % weight	OECD 301C - MITI test (I)
Bismuth(3+) neodecanoate	34364-26-6	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Glycerol	9082-00-2	Data not	N/A	N/A	N/A	N/A

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poly(oxyethylene, oxypropylene) ether		available or insufficient for classification				
Propylidynetri methanol, propoxylated	25723-16-4	Estimated Biodegradation	28 days	BOD	85 % weight	OECD 301F - Manometric respirometry
m-phenylenebis(methylamine)	1477-55-0	Experimental Biodegradation	28 days	CO2 evolution	49 % weight	OECD 301B - Modified sturm or CO2

**12.3 : Bioaccumulative potential**

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
1,1',1'',1'''-Ethylenedinitri lotetrapropan-2-ol	102-60-3	Experimental Bioconcentration		Log Kow	0.27	Other methods
Bismuth(3+) neodecanoate	34364-26-6	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
Propylidynetri methanol, 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

**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. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

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

### EU waste code (product as sold)

- 08 04 09\* Waste adhesives and sealants containing organic solvents or other dangerous substances
- 20 01 27\* Paint, inks, adhesives and resins containing dangerous substances

## SECTION 14: Transportation information

## SECTION 15: Regulatory information

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

#### Global inventory status

Contact 3M for more information. The components of this material are in compliance with the provisions of the Korean Toxic Chemical Control Law. Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Australia National Industrial Chemical Notification and Assessment Scheme (NICNAS). Certain restrictions may apply. Contact the selling division for additional information. The components of this 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.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
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.
R36/38	Irritating to eyes and skin.
R43	May cause sensitisation by skin contact.
R52/53	Harmful to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

### Revision information:

Revision Changes:

Section 1: Product name information was modified.

Page Heading: Product name information was modified.

Section 3: Composition/ Information of ingredients table information was modified.  
Section 12: Component ecotoxicity information information was modified.  
Section 12: Persistence and Degradability information information was modified.  
Section 12: Bioaccumulative potential information 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 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 13: Standard Phrase Category Waste GHS information was modified.  
Section 8: Eye/face protection information information was added.  
Section 8: Eye/face protection text information was added.  
Section 8: Skin protection - protective clothing text information was added.  
Section 10: Hazardous decomposition products during combustion text information was added.  
Section 12: Acute aquatic hazard information information was deleted.  
Section 12: Chronic aquatic hazard heading information was deleted.  
Section 12: Acute aquatic hazard heading information was deleted.  
Section 12: Chronic aquatic hazard information information was deleted.  
Section 8: Personal Protection - Skin/hand information information was deleted.

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

**3M United Kingdom MSDSs are available at [www.3M.com/uk](http://www.3M.com/uk)**