



## Safety Data Sheet

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<b>Issue Date:</b>	22/11/2024	<b>Supersedes date:</b>	13/01/2023

This Safety Data Sheet has been prepared in accordance with the South African National Standard SANS 10234:2008.

### IDENTIFICATION

#### 1.1. Product identifier

3M(TM) Scotch-Weld(TM) Epoxy Adhesive DP105 Clear

#### Product Identification Numbers

62-3287-1435-7

#### 1.2. Recommended use and restrictions on use

Structural adhesive.

#### 1.3. Supplier's details

<b>Address:</b>	3M South Africa (Pty) Ltd, Private Bag X926, Rivonia 2128
<b>Telephone:</b>	011 806 2000
<b>E Mail:</b>	Not available.
<b>Website:</b>	<a href="http://www.3m.co.za">www.3m.co.za</a>

#### 1.4. Emergency telephone number

011 806 2000

**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:**

05-6783-4, 05-6781-8

### TRANSPORT INFORMATION

Compliance is required to South African Transport Information Road Traffic Act & Regulations and Railroad regulations, IATA Standards for airfreight and Maritime standards for ocean freight.

**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 South Africa SDSs are available at [www.3m.co.za](http://www.3m.co.za)**





## Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the South African National Standard SANS 10234:2008.

### SECTION 1: Identification

#### 1.1. Product identifier

3M™ Scotch-Weld™ Epoxy Adhesive DP105 Clear, Part B

#### 1.2. Recommended use and restrictions on use

##### Recommended use

Part B of 2-Component Epoxy Adhesive, Structural adhesive.

#### 1.3. Supplier's details

**Address:** 3M South Africa (Pty) Ltd, Private Bag X926, Rivonia 2128  
**Telephone:** 011 806 2000  
**E Mail:** Not available.  
**Website:** [www.3m.co.za](http://www.3m.co.za)

#### 1.4. Emergency telephone number

011 806 2000

### SECTION 2: Hazard identification

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

Acute Toxicity (oral): Category 5.  
Skin Corrosion/Irritation: Category 3.  
Serious Eye Damage/Irritation: Category 2A  
Skin Sensitizer: Category 1.  
Acute Aquatic Toxicity: Category 3.  
Chronic Aquatic Toxicity: Category 3.

#### 2.2. Label elements

##### Signal word

Warning

##### Symbols

Exclamation mark |

##### Pictograms

**HAZARD STATEMENTS:**

H303	May be harmful if swallowed.
H316	Causes mild skin irritation.
H319	Causes serious eye irritation.
H317	May cause an allergic skin reaction.
H412	Harmful to aquatic life with long lasting effects.

**PRECAUTIONARY STATEMENTS****Prevention:**

P280E	Wear protective gloves.
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**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.

**2.3. Other hazards**

None known.

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

This material is a mixture.

<b>Ingredient</b>	<b>CAS Nbr</b>	<b>% by Wt</b>
4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	30583-72-3	70 - 80
Epoxy Resin	25068-38-6	20 - 24
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	2530-83-8	0.5 - 1.5

**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**

Allergic skin reaction (redness, swelling, blistering, and itching).

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

Not applicable

**SECTION 5: Fire-fighting measures****5.1. Suitable extinguishing media**

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

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

None inherent in this product.

**Hazardous Decomposition or By-Products****Substance**

Aldehydes.

Hydrocarbons.

Carbon monoxide.

Carbon dioxide.

Hydrogen Chloride

Ketones.

Toxic vapour, gas, particulate.

**Condition**

During combustion.

During combustion.

During combustion.

During combustion.

During combustion.

During combustion.

During combustion.

**5.3. Special protective actions for fire-fighters**

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

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

**6.2. Environmental precautions**

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

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

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

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

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

agents (eg. chlorine, chromic acid etc.)

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

Store away from acids. Store away from oxidising agents.

# **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**

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

### **8.2.2. Personal protective equipment (PPE)**

#### **Eye/face protection**

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

Safety glasses with side shields.

Indirect vented goggles.

#### **Skin/hand protection**

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

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

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

#### **Respiratory protection**

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

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

Half facepiece or full facepiece supplied-air respirator

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**

<b>Physical state</b>	Liquid.
<b>Specific Physical Form:</b>	Viscous Liquid

<b>Colour</b>	Colorless
<b>Odor</b>	Slight Epoxy
<b>Odour threshold</b>	<i>No data available.</i>
<b>pH</b>	<i>Not applicable.</i>
<b>Melting point/Freezing point</b>	<i>Not applicable.</i>
<b>Boiling point/Initial boiling point/Boiling range</b>	$\geq 115,6$ °C
<b>Flash point</b>	$\geq 115,6$ °C [ <i>Test Method: Pensky-Martens Closed Cup</i> ]
<b>Evaporation rate</b>	<i>No data available.</i>
<b>Flammability</b>	Not applicable.
<b>Flammable Limits(LEL)</b>	<i>No data available.</i>
<b>Flammable Limits(UEL)</b>	<i>No data available.</i>
<b>Vapour pressure</b>	$\leq 186$ 158,4 Pa [ <i>@ 55 °C</i> ]
<b>Relative Vapor Density</b>	<i>No data available.</i>
<b>Density</b>	1,11 g/ml
<b>Relative density</b>	1,11 [ <i>Ref Std: WATER=1</i> ]
<b>Water solubility</b>	Nil
<b>Solubility- non-water</b>	<i>No data available.</i>
<b>Partition coefficient: n-octanol/water</b>	<i>No data available.</i>
<b>Autoignition temperature</b>	<i>No data available.</i>
<b>Decomposition temperature</b>	<i>No data available.</i>
<b>Kinematic Viscosity</b>	4 505 mm <sup>2</sup> /sec
<b>Volatile organic compounds (VOC)</b>	<i>No data available.</i>
<b>Percent volatile</b>	<i>No data available.</i>
<b>VOC less H<sub>2</sub>O &amp; exempt solvents</b>	$< 20$ g/l [ <i>Test Method: calculated SCAQMD rule 443.1</i> ] [ <i>Details: when used as intended with Part A</i> ]
<b>VOC less H<sub>2</sub>O &amp; exempt solvents</b>	1,5 % [ <i>Test Method: calculated per CARB title 2</i> ] [ <i>Details: when used as intended with Part A</i> ]
<b>VOC less H<sub>2</sub>O &amp; exempt solvents</b>	11 g/l [ <i>Test Method: calculated SCAQMD rule 443.1</i> ] [ <i>Details: as supplied</i> ]
<b>Molecular weight</b>	<i>No data available.</i>

<b>Particle Characteristics</b>	<i>Not applicable.</i>
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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

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

### 10.2 Chemical stability

Stable.

### 10.3 Possibility of hazardous reactions

Hazardous polymerisation will not occur.

### 10.4 Conditions to avoid

Heat is generated during cure. Do not cure a mass larger than 50 grams in a confined space to prevent a premature exothermic reaction with production of intense heat and smoke.

### 10.5 Incompatible materials

Strong acids.

Strong oxidising agents.

**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**

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

**Skin contact**

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

**Eye contact**

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

**Ingestion**

May be harmful if swallowed.

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

**Toxicological Data**

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

**Acute Toxicity**

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE >5 000 mg/kg
Overall product	Ingestion		No data available; calculated ATE >2 000 - =5 000 mg/kg
4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Dermal	Rat	LD50 > 2 000 mg/kg
4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Ingestion	Rat	LD50 > 2 000 mg/kg
Epoxy Resin	Dermal	Rat	LD50 > 1 600 mg/kg
Epoxy Resin	Ingestion	Rat	LD50 > 1 000 mg/kg
[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

ATE = acute toxicity estimate



**Skin Corrosion/Irritation**

Name	Species	Value
4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Rabbit	Minimal irritation
Epoxy Resin	Rabbit	Mild irritant
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	Rabbit	Mild irritant

**Serious Eye Damage/Irritation**

Name	Species	Value
4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Rabbit	Mild irritant
Epoxy Resin	Rabbit	Moderate irritant
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	Rabbit	Corrosive

**Sensitization:****Skin Sensitisation**

Name	Species	Value
4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Mouse	Sensitising
Epoxy Resin	Human and animal	Sensitising
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	Guinea pig	Not classified

**Respiratory Sensitisation**

Name	Species	Value
Epoxy Resin	Human	Not classified

**Germ Cell Mutagenicity**

Name	Route	Value
4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	In vivo	Not mutagenic
4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	In Vitro	Some positive data exist, but the data are not sufficient for classification
Epoxy Resin	In vivo	Not mutagenic
Epoxy Resin	In Vitro	Some positive data exist, but the data are not sufficient for classification
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	In Vitro	Some positive data exist, but the data are not sufficient for classification
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	In vivo	Some positive data exist, but the data are not sufficient for classification

**Carcinogenicity**

Name	Route	Species	Value
Epoxy Resin	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	Dermal	Mouse	Not carcinogenic

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

Name	Route	Value	Species	Test result	Exposure Duration
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4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Ingestion	Not classified for development	Rat	NOAEL 300 mg/kg/day	during gestation
Epoxy Resin	Ingestion	Not classified for female reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
Epoxy Resin	Ingestion	Not classified for male reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
Epoxy Resin	Dermal	Not classified for development	Rabbit	NOAEL 300 mg/kg/day	during organogenesis
Epoxy Resin	Ingestion	Not classified for development	Rat	NOAEL 750 mg/kg/day	2 generation
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	Ingestion	Not classified for female reproduction	Rat	NOAEL 1 000 mg/kg/day	1 generation
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	Ingestion	Not classified for male reproduction	Rat	NOAEL 1 000 mg/kg/day	1 generation
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	Ingestion	Not classified for development	Rat	NOAEL 3 000 mg/kg/day	during organogenesis

### Target Organ(s)

#### Specific Target Organ Toxicity - single exposure

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

#### Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 100 mg/kg/day	90 days
4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Ingestion	heart   endocrine system   gastrointestinal tract   bone, teeth, nails, and/or hair   hematopoietic system   liver   immune system   nervous system   vascular system   skin   muscles   eyes   respiratory system	Not classified	Rat	NOAEL 600 mg/kg/day	90 days
Epoxy Resin	Dermal	liver	Not classified	Rat	NOAEL 1 000 mg/kg/day	2 years
Epoxy Resin	Dermal	nervous system	Not classified	Rat	NOAEL 1 000 mg/kg/day	13 weeks
Epoxy Resin	Ingestion	auditory system   heart   endocrine system   hematopoietic system   liver   eyes   kidney and/or bladder	Not classified	Rat	NOAEL 1 000 mg/kg/day	28 days
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	Ingestion	heart   endocrine system   bone, teeth, nails, and/or hair   hematopoietic system   liver   immune system   nervous system	Not classified	Rat	NOAEL 1 000 mg/kg/day	28 days

		kidney and/or bladder   respiratory system				
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**Aspiration Hazard**

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

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

## 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****Acute aquatic hazard:**

GHS Acute 3: Harmful to aquatic life.

**Chronic aquatic hazard:**

GHS Chronic 3: Harmful to aquatic life with long lasting effects.

No product test data available.

Material	CAS Nbr	Organism	Type	Exposure	Test endpoint	Test result
4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	30583-72-3	Activated sludge	Experimental	3 hours	NOEC	1 000 mg/l
4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	30583-72-3	Green algae	Experimental	72 hours	EC50	>100 mg/l
4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	30583-72-3	Rainbow trout	Experimental	96 hours	LC50	11,5 mg/l
Epoxy Resin	25068-38-6	Activated sludge	Estimated	3 hours	IC50	>100 mg/l
Epoxy Resin	25068-38-6	Green algae	Estimated	72 hours	EC50	>11 mg/l
Epoxy Resin	25068-38-6	Rainbow trout	Estimated	96 hours	LC50	2 mg/l
Epoxy Resin	25068-38-6	Water flea	Estimated	48 hours	EC50	1,8 mg/l
Epoxy Resin	25068-38-6	Green algae	Estimated	72 hours	NOEC	4,2 mg/l
Epoxy Resin	25068-38-6	Water flea	Estimated	21 days	NOEC	0,3 mg/l
[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	Green algae	Experimental	96 hours	ErC50	350 mg/l

[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	2530-83-8	Invertebrate	Experimental	48 hours	LC50	324 mg/l
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	2530-83-8	Green algae	Experimental	96 hours	NOEC	130 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	Activated sludge	Experimental	3 hours	EC50	>100 mg/l

## 12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	30583-72-3	Experimental Biodegradation	28 days	BOD	0.1 %BOD/ThOD	OECD 301D - Closed bottle test
Epoxy Resin	25068-38-6	Estimated Biodegradation	28 days	BOD	5 %BOD/COD	OECD 301F - Manometric respirometry
Epoxy Resin	25068-38-6	Estimated Hydrolysis		Hydrolytic half-life	117 hours (t 1/2)	
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	2530-83-8	Experimental Biodegradation	28 days	Dissolv. Organic Carbon Deplet	37 %removal of DOC	EC C.4.A. DOC Die-Away Test
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	2530-83-8	Experimental Hydrolysis		Hydrolytic half-life (pH 7)	6.5 hours (t 1/2)	OECD 111 Hydrolysis func of pH

## 12.3 : Bioaccumulative potential

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	30583-72-3	Experimental Bioconcentration		Log Kow	3.84	
Epoxy Resin	25068-38-6	Estimated Bioconcentration		Log Kow	3.242	
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	2530-83-8	Experimental Bioconcentration		Log Kow	0.5	Episuite™

## 12.4. Mobility in soil

Please contact manufacturer for more details

## 12.5 Other adverse effects

No information available.

# SECTION 13: Disposal considerations

## 13.1. Disposal methods

Product must only be disposed of by an authorized/permitted waste disposal contractor or incinerated in an industrial or commercial facility in the presence of a combustible material.

## **SECTION 14: Transport Information**

Compliance is required to South African Transport Information Road Traffic Act & Regulations and Railroad regulations, IATA Standards for airfreight and Maritime standards for ocean freight.

## **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 Korea Chemical Control Act. Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Australia National Industrial Chemical Notification and Assessment Scheme (NICNAS). Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Japan Chemical Substance Control Law. Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Philippines RA 6969 requirements. Certain restrictions may apply. Contact the selling division for additional information. The components of this product are in compliance with the new substance notification requirements of CEPA. This product complies with Measures on Environmental Management of New Chemical Substances. All ingredients are listed on or exempt from on China IECSC inventory. The components of this product are in compliance with the chemical notification requirements of TSCA. All required components of this product are listed on the active portion of the TSCA Inventory.

## **SECTION 16: Other information**

#### **Revision information:**

Section 8: Eye/face protection information information was modified.  
Section 8: Personal Protection - Skin/body information information was added.  
Section 8: Respiratory protection - recommended respirators information information was modified.  
Section 8: Skin protection - protective clothing information information was added.  
Section 9: Flammability (solid, gas) information information was deleted.  
Section 09: Flammability information information was added.  
Section 09: Kinematic Viscosity information information was added.  
Section 09: Particle Characteristics N/A information was added.  
Section 09: Vapor Density Value information was modified.  
Section 09: Viscosity information was deleted.  
Section 11: Germ Cell Mutagenicity Table information was modified.

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**3M South Africa SDSs are available at [www.3m.co.za](http://www.3m.co.za)**



## Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the South African National Standard SANS 10234:2008.

### SECTION 1: Identification

#### 1.1. Product identifier

3M™ Scotch-Weld™ Epoxy Adhesive DP105 Clear, Part A

#### 1.2. Recommended use and restrictions on use

##### Recommended use

Part A of 2-Component Epoxy Adhesive, Structural adhesive.

#### 1.3. Supplier's details

<b>Address:</b>	3M South Africa (Pty) Ltd, Private Bag X926, Rivonia 2128
<b>Telephone:</b>	011 806 2000
<b>E Mail:</b>	Not available.
<b>Website:</b>	www.3m.co.za

#### 1.4. Emergency telephone number

011 806 2000

### SECTION 2: Hazard identification

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

Acute Toxicity (oral): Category 4.  
Skin Corrosion/Irritation: Category 3.  
Skin Sensitizer: Category 1.  
Acute Aquatic Toxicity: Category 3.  
Chronic Aquatic Toxicity: Category 3.

#### 2.2. Label elements

##### Signal word

Warning

##### Symbols

Exclamation mark |

##### Pictograms

**HAZARD STATEMENTS:**

H302	Harmful if swallowed.
H316	Causes mild skin irritation.
H317	May cause an allergic skin reaction.
H412	Harmful to aquatic life with long lasting effects.

**PRECAUTIONARY STATEMENTS****Prevention:**

P280E Wear protective gloves.

**Response:**

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

**2.3. Other hazards**

Persons previously sensitised to amines may develop a cross-sensitisation reaction to certain other amines. Eye damage/irrit. class not applied based on test data in similar mix A similar mixture has been tested for eye damage/irritation and the test results do not meet the criteria for classification. Skin corrosion/irritation class. based on test data in similar mix

A similar mixture has been tested for skin corrosion/irritation and the test results are reflected in the assigned classification.

## SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	CAS Nbr	% by Wt
Reaction products of pentaerythritol, propoxylated and 1-chloro-2,3-epoxypropane with hydrogen sulphide	72244-98-5	85 - 100
TRIETHYLENETETRAMINE, PROPOXYLATED	26950-63-0	1 - 10
N,N,N',N'-Tetramethyl-2,2'-oxybis(ethylamine)	3033-62-3	< 5
1,8-Diazabicyclo[5.4.0]undec-7-ene	6674-22-2	< 3
Triethylenetetramine	112-24-3	< 3

## 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**

Allergic skin reaction (redness, swelling, blistering, and itching).

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

Not applicable

**SECTION 5: Fire-fighting measures****5.1. Suitable 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**

Closed containers exposed to heat from fire may build pressure and explode.

**Hazardous Decomposition or By-Products****Substance**

Carbon monoxide.

Carbon dioxide.

Oxides of sulphur.

Toxic vapour, gas, particulate.

**Condition**

During combustion.

During combustion.

During combustion.

During combustion.

**5.3. Special protective actions for fire-fighters**

Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture. Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

Use personal protective equipment based on the results of an exposure assessment. Refer to Section 8 for PPE recommendations. If anticipated exposure resulting from an accidental release exceeds the protective capabilities of the PPE listed in Section 8, or are unknown, select PPE that offers an appropriate level of protection. Consider the physical and chemical hazards of the material when doing so. Examples of PPE ensembles for emergency response could include wearing bunker gear for a release of flammable material; wearing chemical protective clothing if the spilled material is a corrosive, a sensitizer, a significant dermal irritant, or can be absorbed through the skin; or donning a positive pressure supplied-air respirator for chemicals with inhalation hazards. For information regarding physical and health hazards, refer to sections 2 and 11 of the SDS. Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice.

**6.2. Environmental precautions**

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

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

Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue with an appropriate



solvent selected by a qualified and authorised person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and Safety Data Sheet. Seal the container. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Avoid breathing dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse.

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

No special storage requirements.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

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

Ingredient	CAS Nbr	Agency	Limit type	Additional comments
Triethylenetetramine	112-24-3	AIHA	TWA:6 mg/m <sup>3</sup> (1 ppm)	SKIN
N,N,N',N'-Tetramethyl-2,2'-oxybis(ethylamine)	3033-62-3	ACGIH	TWA:0.05 ppm;STEL:0.15 ppm	Danger of cutaneous absorption

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

South Africa CLs : South Africa. Control Limits. Regulations for Hazardous Chemical Substances, Table 1

South Africa RELs : South Africa. Recommended Exposure Limits (RELs) Regulations for Hazardous Chemical Substances, Table 2

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

### 8.2. Exposure controls

#### 8.2.1. Engineering controls

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

#### 8.2.2. Personal protective equipment (PPE)

##### Eye/face protection

None required.

##### Skin/hand protection

Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity. Gloves made from the following material(s) are recommended: Polymer laminate

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

## Respiratory protection

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

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

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

## SECTION 9: Physical and chemical properties

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

Physical state	Liquid.
Colour	Colorless
Odor	Strong Mercaptan
Odour threshold	No data available.
pH	Not applicable.
Melting point/Freezing point	Not applicable.
Boiling point/Initial boiling point/Boiling range	$\geq 93,3$ °C
Flash point	$\geq 93,3$ °C [Test Method: Closed Cup]
Evaporation rate	No data available.
Flammability	Not applicable.
Flammable Limits(LEL)	No data available.
Flammable Limits(UEL)	No data available.
Vapour pressure	$\leq 13,3$ Pa
Relative Vapor Density	No data available.
Density	1,15 g/ml
Relative density	1,15 [Ref Std: WATER=1]
Water solubility	Nil
Solubility- non-water	No data available.
Partition coefficient: n-octanol/water	No data available.
Autoignition temperature	No data available.
Decomposition temperature	No data available.
Kinematic Viscosity	10 435 mm <sup>2</sup> /sec
Volatile organic compounds (VOC)	No data available.
Percent volatile	No data available.
VOC less H <sub>2</sub> O & exempt solvents	< 20 g/l [Test Method: calculated SCAQMD rule 443.1] [Details: when used as intended with Part B]
VOC less H <sub>2</sub> O & exempt solvents	1,5 % [Test Method: calculated SCAQMD rule 443.1] [Details: when used as intended with Part B]
VOC less H <sub>2</sub> O & exempt solvents	$\leq 35$ g/l [Test Method: calculated SCAQMD rule 443.1] [Details: as supplied]
Molecular weight	No data available.

Particle Characteristics	Not applicable.
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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

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

## 10.2 Chemical stability

Stable.

## 10.3 Possibility of hazardous reactions

Hazardous polymerisation will not occur.

## 10.4 Conditions to avoid

Heat is generated during cure. Do not cure a mass larger than 50 grams in a confined space to prevent a premature exothermic reaction with production of intense heat and smoke.

## 10.5 Incompatible materials

None known.

## 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

No health effects are expected.

#### Skin contact

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

#### Eye contact

Contact with the eyes during product use is not expected to result in significant irritation.

#### Ingestion

Harmful if swallowed.

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

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

## Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE >5 000 mg/kg
Overall product	Inhalation-Vapor(4 hr)		No data available; calculated ATE >50 mg/l
Overall product	Ingestion		No data available; calculated ATE >300 - =2 000 mg/kg
Reaction products of pentaerythritol, propoxylated and 1-chloro-2,3-epoxypropane with hydrogen sulphide	Dermal	Rabbit	LD50 > 10 200 mg/kg
Reaction products of pentaerythritol, propoxylated and 1-chloro-2,3-epoxypropane with hydrogen sulphide	Ingestion	Rat	LD50 2 600 mg/kg
TRIETHYLENETETRAMINE, PROPOXYLATED	Dermal	Rat	LD50 2 150 mg/kg
TRIETHYLENETETRAMINE, PROPOXYLATED	Ingestion	Rat	LD50 4 500 mg/kg
N,N,N',N'-Tetramethyl-2,2'-oxybis(ethylamine)	Dermal	Rabbit	LD50 311 mg/kg
N,N,N',N'-Tetramethyl-2,2'-oxybis(ethylamine)	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 3,4 mg/l
N,N,N',N'-Tetramethyl-2,2'-oxybis(ethylamine)	Inhalation-Vapor (4 hours)	Rat	LC50 > 2,2 mg/l
N,N,N',N'-Tetramethyl-2,2'-oxybis(ethylamine)	Ingestion	Rat	LD50 571 mg/kg
Triethylenetetramine	Dermal	Rat	LD50 1 465 mg/kg
Triethylenetetramine	Ingestion	Rat	LD50 1 591 mg/kg
1,8-Diazabicyclo[5.4.0]undec-7-ene	Dermal	Rabbit	LD50 1 233 mg/kg
1,8-Diazabicyclo[5.4.0]undec-7-ene	Ingestion	Rat	LD50 > 300, < 681 mg/kg

ATE = acute toxicity estimate

### Skin Corrosion/Irritation

Name	Species	Value
Overall product	Rabbit	Mild irritant
Reaction products of pentaerythritol, propoxylated and 1-chloro-2,3-epoxypropane with hydrogen sulphide	Rabbit	No significant irritation
TRIETHYLENETETRAMINE, PROPOXYLATED	Rabbit	Irritant
N,N,N',N'-Tetramethyl-2,2'-oxybis(ethylamine)	Rabbit	Corrosive
Triethylenetetramine	Rabbit	Corrosive
1,8-Diazabicyclo[5.4.0]undec-7-ene	In vitro data	Corrosive

### Serious Eye Damage/Irritation

Name	Species	Value
Overall product	Rabbit	Mild irritant
Reaction products of pentaerythritol, propoxylated and 1-chloro-2,3-epoxypropane with hydrogen sulphide	Rabbit	Mild irritant
TRIETHYLENETETRAMINE, PROPOXYLATED	Rabbit	Severe irritant
N,N,N',N'-Tetramethyl-2,2'-oxybis(ethylamine)	Rabbit	Corrosive
Triethylenetetramine	Rabbit	Corrosive
1,8-Diazabicyclo[5.4.0]undec-7-ene	similar health hazards	Corrosive

### Sensitization:

#### Skin Sensitisation

Name	Species	Value
Reaction products of pentaerythritol, propoxylated and 1-chloro-2,3-epoxypropane with hydrogen sulphide	Mouse	Sensitising
TRIETHYLENETETRAMINE, PROPOXYLATED	Mouse	Sensitising
N,N,N',N'-Tetramethyl-2,2'-oxybis(ethylamine)	Multiple animal species	Not classified
Triethylenetetramine	Guinea	Sensitising

	pig	
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### Respiratory Sensitisation

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

### Germ Cell Mutagenicity

Name	Route	Value
Reaction products of pentaerythritol, propoxylated and 1-chloro-2,3-epoxypropane with hydrogen sulphide	In Vitro	Not mutagenic
TRIETHYLENETETRAMINE, PROPOXYLATED	In Vitro	Some positive data exist, but the data are not sufficient for classification
N,N,N',N'-Tetramethyl-2,2'-oxybis(ethylamine)	In Vitro	Not mutagenic
N,N,N',N'-Tetramethyl-2,2'-oxybis(ethylamine)	In vivo	Not mutagenic
Triethylenetetramine	In vivo	Not mutagenic
Triethylenetetramine	In Vitro	Some positive data exist, but the data are not sufficient for classification
1,8-Diazabicyclo[5.4.0]undec-7-ene	In Vitro	Not mutagenic

### Carcinogenicity

Name	Route	Species	Value
Triethylenetetramine	Dermal	Mouse	Not carcinogenic

### Reproductive Toxicity

#### Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
TRIETHYLENETETRAMINE, PROPOXYLATED	Ingestion	Not classified for female reproduction	Rat	NOAEL 750 mg/kg/day	premating into lactation
TRIETHYLENETETRAMINE, PROPOXYLATED	Ingestion	Not classified for male reproduction	Rat	NOAEL 750 mg/kg/day	43 days
TRIETHYLENETETRAMINE, PROPOXYLATED	Ingestion	Not classified for development	Rat	NOAEL 750 mg/kg/day	premating into lactation
N,N,N',N'-Tetramethyl-2,2'-oxybis(ethylamine)	Dermal	Not classified for development	Rabbit	NOAEL 12 mg/kg/day	during organogenesis
Triethylenetetramine	Dermal	Not classified for development	Rabbit	NOAEL 125 mg/kg/day	during organogenesis
Triethylenetetramine	Ingestion	Not classified for development	Rat	NOAEL 750 mg/kg/day	during organogenesis
1,8-Diazabicyclo[5.4.0]undec-7-ene	Ingestion	Not classified for female reproduction	Rat	NOAEL 150 mg/kg/day	premating into lactation
1,8-Diazabicyclo[5.4.0]undec-7-ene	Ingestion	Not classified for male reproduction	Rat	NOAEL 150 mg/kg/day	29 days
1,8-Diazabicyclo[5.4.0]undec-7-ene	Ingestion	Not classified for development	Rat	NOAEL 150 mg/kg/day	during gestation

### Target Organ(s)

#### Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
TRIETHYLENETETRAMINE, PROPOXYLATED	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL not available	
N,N,N',N'-Tetramethyl-2,2'-oxybis(ethylamine)	Inhalation	respiratory irritation	May cause respiratory irritation	similar health hazards	NOAEL Not available	
Triethylenetetramine	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	
1,8-Diazabicyclo[5.4.0]undec-	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for	similar health	NOAEL Not available	

7-ene			classification	hazards		
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**Specific Target Organ Toxicity - repeated exposure**

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Reaction products of pentaerythritol, propoxylated and 1-chloro-2,3-epoxypropane with hydrogen sulphide	Ingestion	hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 75 mg/kg/day	90 days
Reaction products of pentaerythritol, propoxylated and 1-chloro-2,3-epoxypropane with hydrogen sulphide	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 250 mg/kg/day	90 days
Reaction products of pentaerythritol, propoxylated and 1-chloro-2,3-epoxypropane with hydrogen sulphide	Ingestion	endocrine system   heart   skin   immune system   nervous system   eyes   kidney and/or bladder   respiratory system   vascular system	Not classified	Rat	NOAEL 1 000 mg/kg/day	90 days
TRIETHYLENETETRAMINE, PROPOXYLATED	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 300 mg/kg/day	43 days
N,N,N',N'-Tetramethyl-2,2'-oxybis(ethylamine)	Dermal	skin   heart   endocrine system   gastrointestinal tract   hematopoietic system   liver   immune system   muscles   nervous system   kidney and/or bladder   respiratory system   vascular system	Not classified	Rabbit	NOAEL 8 mg/kg/day	90 days
N,N,N',N'-Tetramethyl-2,2'-oxybis(ethylamine)	Inhalation	skin   endocrine system   eyes   respiratory system   heart   hematopoietic system   liver   immune system   nervous system   kidney and/or bladder	Not classified	Rat	NOAEL 0,038 mg/l	14 weeks
N,N,N',N'-Tetramethyl-2,2'-oxybis(ethylamine)	Ingestion	gastrointestinal tract   liver   kidney and/or bladder   respiratory system	Not classified	Rat	NOAEL 150 mg/kg/day	7 days
N,N,N',N'-Tetramethyl-2,2'-oxybis(ethylamine)	Ingestion	heart   endocrine system   hematopoietic system   nervous system	Not classified	Rat	NOAEL 220 mg/kg/day	7 days
1,8-Diazabicyclo[5.4.0]undec-7-ene	Ingestion	heart   skin   endocrine system   gastrointestinal tract   bone, teeth, nails, and/or hair   hematopoietic system   liver   immune system   muscles   nervous system   eyes   kidney and/or bladder   respiratory	Not classified	Rat	NOAEL 120 mg/kg/day	90 days

		system   vascular system				
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**Aspiration Hazard**

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

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

**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****Acute aquatic hazard:**

GHS Acute 3: Harmful to aquatic life.

**Chronic aquatic hazard:**

GHS Chronic 3: Harmful to aquatic life with long lasting effects.

No product test data available.

Material	CAS Nbr	Organism	Type	Exposure	Test endpoint	Test result
Reaction products of pentaerythritol, propoxylated and 1-chloro-2,3-epoxypropane with hydrogen sulphide	72244-98-5	Activated sludge	Experimental	3 hours	EC50	>1 000 mg/l
Reaction products of pentaerythritol, propoxylated and 1-chloro-2,3-epoxypropane with hydrogen sulphide	72244-98-5	Green algae	Experimental	72 hours	EC50	>733 mg/l
Reaction products of pentaerythritol, propoxylated and 1-chloro-2,3-epoxypropane with hydrogen sulphide	72244-98-5	Water flea	Experimental	48 hours	EC50	12 mg/l
Reaction products of pentaerythritol, propoxylated and 1-chloro-2,3-epoxypropane with hydrogen sulphide	72244-98-5	Zebra Fish	Experimental	96 hours	LC50	87 mg/l
Reaction products of pentaerythritol, propoxylated and 1-chloro-2,3-epoxypropane with hydrogen sulphide	72244-98-5	Green algae	Experimental	72 hours	NOEC	338 mg/l
Reaction products of pentaerythritol, propoxylated and 1-chloro-2,3-epoxypropane with hydrogen sulphide	72244-98-5	Water flea	Experimental	21 days	NOEC	3,5 mg/l

epoxypropane with hydrogen sulphide						
TRIETHYLENETETRAMINE, PROPOXYLATED	26950-63-0	Green algae	Experimental	72 hours	EC50	4,1 mg/l
TRIETHYLENETETRAMINE, PROPOXYLATED	26950-63-0	Rainbow trout	Experimental	96 hours	LC50	>4,1 mg/l
TRIETHYLENETETRAMINE, PROPOXYLATED	26950-63-0	Water flea	Experimental	48 hours	EC50	48 mg/l
TRIETHYLENETETRAMINE, PROPOXYLATED	26950-63-0	Green algae	Experimental	72 hours	ErC10	0,11 mg/l
TRIETHYLENETETRAMINE, PROPOXYLATED	26950-63-0	Activated sludge	Experimental	3 hours	EC10	38 mg/l
N,N,N',N'-Tetramethyl-2,2'-oxybis(ethylamine)	3033-62-3	Activated sludge	Experimental	30 minutes	EC20	>720 mg/l
N,N,N',N'-Tetramethyl-2,2'-oxybis(ethylamine)	3033-62-3	Green algae	Experimental	72 hours	ErC50	24 mg/l
N,N,N',N'-Tetramethyl-2,2'-oxybis(ethylamine)	3033-62-3	Water flea	Experimental	48 hours	EC50	102 mg/l
N,N,N',N'-Tetramethyl-2,2'-oxybis(ethylamine)	3033-62-3	Zebra Fish	Experimental	96 hours	LC50	131,2 mg/l
N,N,N',N'-Tetramethyl-2,2'-oxybis(ethylamine)	3033-62-3	Green algae	Experimental	72 hours	ErC10	5 mg/l
1,8-Diazabicyclo[5.4.0]undec-7-ene	6674-22-2	Activated sludge	Experimental	30 minutes	EC20	650 mg/l
1,8-Diazabicyclo[5.4.0]undec-7-ene	6674-22-2	Bacteria	Experimental	17 hours	EC10	210 mg/l
1,8-Diazabicyclo[5.4.0]undec-7-ene	6674-22-2	Golden Orfe	Experimental	96 hours	LC50	>=146,6 mg/l
1,8-Diazabicyclo[5.4.0]undec-7-ene	6674-22-2	Green algae	Experimental	72 hours	EC50	>100 mg/l
1,8-Diazabicyclo[5.4.0]undec-7-ene	6674-22-2	Water flea	Experimental	48 hours	EC50	50 mg/l
1,8-Diazabicyclo[5.4.0]undec-7-ene	6674-22-2	Green algae	Experimental	72 hours	EC10	>100 mg/l
1,8-Diazabicyclo[5.4.0]undec-7-ene	6674-22-2	Water flea	Experimental	21 days	NOEC	12 mg/l
Triethylenetetramine	112-24-3	Green algae	Experimental	72 hours	EC50	27,4 mg/l
Triethylenetetramine	112-24-3	Guppy	Experimental	96 hours	LC50	570 mg/l
Triethylenetetramine	112-24-3	Water flea	Experimental	48 hours	EC50	37,4 mg/l
Triethylenetetramine	112-24-3	Green algae	Experimental	72 hours	NOEC	0,468 mg/l
Triethylenetetramine	112-24-3	Water flea	Experimental	21 days	NOEC	2,86 mg/l

## 12.2. Persistence and degradability



Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Reaction products of pentaerythritol, propoxylated and 1-chloro-2,3-epoxypropane with hydrogen sulphide	72244-98-5	Experimental Biodegradation	28 days	CO2 evolution	5 %CO2 evolution/THCO2 evolution	OECD 301B - Modified sturm or CO2
TRIETHYLENET ETRAMINE, PROPOXYLATED	26950-63-0	Experimental Biodegradation	28 days	BOD	4 %BOD/ThOD	OECD 301F - Manometric respirometry
TRIETHYLENET ETRAMINE, PROPOXYLATED	26950-63-0	Experimental Hydrolysis		Hydrolytic half-life (pH 7)	>1 years (t 1/2)	OECD 111 Hydrolysis func of pH
N,N,N',N'-Tetramethyl-2,2'-oxybis(ethylamine)	3033-62-3	Experimental Biodegradation	28 days	BOD	0 %BOD/ThOD	OECD 301C - MITI test (I)
1,8-Diazabicyclo[5.4.0]undec-7-ene	6674-22-2	Experimental Biodegradation	28 days	BOD	0 %BOD/ThOD	OECD 301C - MITI test (I)
Triethylenetetramine	112-24-3	Experimental Biodegradation	20 days	BOD	0 %BOD/ThOD	OECD 301D - Closed bottle test

### 12.3 : Bioaccumulative potential

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Reaction products of pentaerythritol, propoxylated and 1-chloro-2,3-epoxypropane with hydrogen sulphide	72244-98-5	Estimated Bioconcentration		Log Kow	>1.2	
TRIETHYLENET ETRAMINE, PROPOXYLATED	26950-63-0	Unknown Bioconcentration		Log Kow	-2.42	
N,N,N',N'-Tetramethyl-2,2'-oxybis(ethylamine)	3033-62-3	Experimental Bioconcentration		Log Kow	-0.339	OECD 107 log Kow shke flask mtd
1,8-Diazabicyclo[5.4.0]undec-7-ene	6674-22-2	Experimental BCF - Fish	42 days	Bioaccumulation factor	<3.6	OECD305-Bioconcentration
Triethylenetetramine	112-24-3	Experimental BCF - Fish	42 days	Bioaccumulation factor	<5.0	OECD305-Bioconcentration

### 12.4. Mobility in soil

Please contact manufacturer for more details

### 12.5 Other adverse effects

No information available.

## SECTION 13: Disposal considerations

### 13.1. Disposal methods

Product must only be disposed of by an authorized/permitted waste disposal contractor or incinerated in an industrial or commercial facility in the presence of a combustible material.

## SECTION 14: Transport Information

Compliance is required to South African Transport Information Road Traffic Act & Regulations and Railroad regulations,

IATA Standards for airfreight and Maritime standards for ocean freight.

## **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 Korea Chemical Control Act. Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Australia National Industrial Chemical Notification and Assessment Scheme (NICNAS). Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Japan Chemical Substance Control Law. Certain restrictions may apply. Contact the selling division for additional information. The components of this product are in compliance with the new substance notification requirements of CEPA. This product complies with Measures on Environmental Management of New Chemical Substances. All ingredients are listed on or exempt from on China IECSC inventory. The components of this product are in compliance with the chemical notification requirements of TSCA. All required components of this product are listed on the active portion of the TSCA Inventory.

## **SECTION 16: Other information**

#### **Revision information:**

Section 6: Accidental release personal information information was modified.

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

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

**3M South Africa SDSs are available at [www.3m.co.za](http://www.3m.co.za)**