Safety Data Sheet

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Issue Date:	23/05/2023	**Supercedes Date:**	11/06/2021

This Safety Data Sheet has been prepared in accordance with the Malaysia Occupational Safety and Health (Chemical Classification, Labelling and Safety Data Sheets) Regulations 2013.

IDENTIFICATION

1.1. Product identifier
3M™ Scotch-Weld™ Epoxy Structural Adhesive DP-760 Off-White

Product Identification Numbers

FJ-760B-0400-0	FJ-9251-0562-1	FS-9100-2899-2	FS-9100-2985-9	FS-9100-3299-4
FS-9100-3300-0	FS-9100-3326-5	FS-9100-3477-6	FS-9100-3478-4	FS-9100-4044-3
FS-9100-4045-0	FS-9100-4046-8	FS-9100-4047-6	UU-0101-3338-5	UU-0101-3339-3
UU-0101-3340-1	UU-0125-1602-5			

1.2. Recommended use and restrictions on use

Recommended use
Structural adhesive

1.3. Supplier's details
ADDRESS: 3M Malaysia Sdn. Bhd., Level 8, Block F, Oasis Square, No.2, Jalan PJU 1A/7A, Ara Damansara 47301 Petaling, Jaya, Selangor
Telephone: 03-7884 2888
E Mail: 3mmyehsr@mmm.com
Website: www.3M.com.my

1.4. Emergency telephone number
+60 03-7884 2888

This product is a kit or a multipart product which consists of multiple, independently packaged components. An SDS for each of these components is included. Please do not separate the component SDSs from this cover page. The document numbers of the SDSs for components of this product are:

09-0181-9, 09-0180-1

TRANSPORT INFORMATION

This product is a kit that consists of two or more different regulated materials packed in the same outer packaging (ship unit). The transportation classifications of the individual components appear in Section 14 of the attached SDSs.

Transportation classifications are provided as a customer service. As for shipping, YOU remain responsible for complying with all applicable laws and regulations, including proper transportation classification and packaging. 3M's transportation classifications are based on product formulation, packaging, 3M policies and 3M's understanding of applicable current regulations. 3M does not guarantee the accuracy of this classification information. This information applies only to transportation classification and not the packaging, labeling or marking requirements. The above information is only for reference. If you are shipping by air or ocean, YOU are advised to check & meet applicable regulatory requirements.

DISCLAIMER: The information in this Safety Data Sheet (SDS) 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 SDS or use of the product in combination with other materials. For these reasons, it is important that customers carry out their own evaluation to satisfy themselves as to the suitability of the product for their own intended applications. In addition, this SDS is being provided to convey health and safety information. If you are the importer of record of this product into Malaysia, you are responsible for all applicable regulatory requirements, including, but not limited to, product registrations/notifications, substance volume tracking, and potential substance registration/notification.
3M Malaysia SDSs are available at www.3M.com.my

Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the Malaysia Occupational Safety and Health (Chemical Classification, Labelling and Safety Data Sheets) Regulations 2013.

SECTION 1: Identification

1.1. Product identifier
3M™ Scotch-Weld™ Epoxy Structural Adhesive DP-760 Off-White : Part B

Product Identification Numbers
FJ-9251-0339-4

1.2. Recommended use and restrictions on use

Recommended use
Part B of a non-sag, two-part room temperature curing adhesive designed for use when high temperature resistance is required., Structural adhesive

1.3. Supplier's details
ADDRESS: 3M Malaysia Sdn. Bhd., Level 8, Block F, Oasis Square, No.2, Jalan PJU 1A/7A, Ara Damansara 47301 Petaling, Jaya, Selangor
Telephone: 03-7884 2888
E Mail: 3mmyehsr@mmm.com
Website: www.3M.com.my

1.4. Emergency telephone number
+60 03-7884 2888

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture
Acute Toxicity (oral): Category 4.
Skin Corrosion/Irritation: Category 2.
Serious Eye Damage/Irritation: Category 2.
Skin Sensitizer: Category 1.
Germ Cell Mutagenicity: Category 2.
Chronic Aquatic Toxicity: Category 2.

2.2. Label elements
Signal word
Warning

Symbols
Exclamation mark |Health Hazard |Environment |

Pictograms

Hazard Statements:

H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H317	May cause an allergic skin reaction.
H341	Suspected of causing genetic defects.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention:

P273	Avoid release to the environment.
P280E	Wear protective gloves.
P281	Use personal protective equipment as required.

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.

2.3. Other hazards
Although titanium dioxide is classified as a carcinogen, exposures associated with this health effect are not expected during normal, intended use of this product.

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	C.A.S. No.	% by Wt
4-(DIGLYCIDYLAMINO)PHENYL GLYCIDYL ETHER	5026-74-4	30 - 60
EPICHLOROHYDRIN-PHENOL-FORMALDEHYDE RESIN	9003-36-5	7 - 15
Bisphenol A Diglycidyl Ether	1675-54-3	7 - 13
Fused Silica	60676-86-0	3 - 8
Acrylic copolymer	Trade Secret	< 8
Vinyl-Acrylic copolymer	Trade Secret	< 8
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	1 - 5
Titanium Dioxide	13463-67-7	1 - 3

3-(trimethoxysilyl)propyl glycidyl ether	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	Condition
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Irritant Vapors or Gases	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.

6.3. Methods and material for containment and cleaning up
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 authorized person. Ventilate the

area with fresh air. Read and follow safety precautions on the solvent label and SDS. 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
For industrial/occupational use only. Not for consumer sale or use. Do not handle until all safety precautions have been read and understood. Avoid breathing dust/fume/gas/mist/vapors/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. Use personal protective equipment (gloves, respirators, etc.) as required.

7.2. Conditions for safe storage including any incompatibilities
Store away from heat. Store away from acids.

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	C.A.S. No.	Agency	Limit type	Additional Comments
DUST, INERT OR NUISANCE	13463-67-7	Malaysia OELs	TWA (proposed)(respirable particles)(8 hours):3 mg/m3;TWA (proposed)(Inhalable particulate)(8 hours):10 mg/m3	
Titanium Dioxide	13463-67-7	ACGIH	TWA(Respirable nanoscale particles):0.2 mg/m3;TWA(Respirable finescale particles):2.5 mg/m3	A3: Confirmed animal carcin.
Titanium Dioxide	13463-67-7	Malaysia OELs	TWA(8 hours):10 mg/m3	
DUST, INERT OR NUISANCE	60676-86-0	Malaysia OELs	TWA (proposed)(respirable particles)(8 hours):3 mg/m3;TWA (proposed)(Inhalable particulate)(8 hours):10 mg/m3	
Fused Silica	60676-86-0	Malaysia OELs	TWA(respirable fraction)(8 hours):0.1 mg/m3	
Particles (insoluble or poorly soluble) not otherwise specified, inhalable particles	60676-86-0	ACGIH	TWA(inhalable particulates):10 mg/m3	
Particles (insoluble or poorly soluble) not otherwise specified, respirable particles	60676-86-0	ACGIH	TWA(respirable particles):3 mg/m3	

ACGIH : American Conference of Governmental Industrial Hygienists
CMRG : Chemical Manufacturer's Recommended Guidelines
Malaysia OELs : Malaysia. Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to Health) Regulations
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/vapors/spray. If ventilation is not adequate, use respiratory protection equipment.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

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

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 vapors

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	Solid
Specific Physical Form:	Paste
Color	Off-White
Odor	Epoxy
Odor threshold	*No Data Available*
pH	*Not Applicable*
Melting point/Freezing point	*No Data Available*
Boiling point/Initial boiling point/Boiling range	*Not Applicable*
Flash Point	>=100 ºC [*Test Method:*Closed Cup]
Evaporation rate	*Not Applicable*
Flammability (solid, gas)	Not Classified
Flammable Limits(LEL)	*Not Applicable*
Flammable Limits(UEL)	*Not Applicable*
Vapor Pressure	*Not Applicable*
Vapor Density and/or Relative Vapor Density	*Not Applicable*
Density	>=1.23 g/cm3
Relative Density	1.23 - 1.29 [*Ref Std:*WATER=1]
Water solubility	Negligible

Solubility- non-water	*No Data Available*
Partition coefficient: n-octanol/ water	*No Data Available*
Autoignition temperature	*Not Applicable*
Decomposition temperature	*No Data Available*
Viscosity/Kinematic Viscosity	1,050 Pa-s
Volatile Organic Compounds	*No Data Available*
Percent volatile	1 % weight
VOC Less H2O & Exempt Solvents	*No Data Available*
Molecular weight	*No Data Available*

SECTION 10: Stability and reactivity

10.1. Reactivity
This material is considered to be non reactive under normal use conditions.

10.2. Chemical stability
Stable.

10.3. Possibility of hazardous reactions
Hazardous polymerization will not occur.

10.4. Conditions to avoid
Heat

10.5. Incompatible materials
Strong acids

10.6. Hazardous decomposition products

Substance	**Condition**
None known.	

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, 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:
Harmful if swallowed. Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

Additional Health Effects:

Genotoxicity:
Genotoxicity and Mutagenicity: May interact with genetic material and possibly alter gene expression.

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 >300 - =2,000 mg/kg
4-(DIGLYCIDYLAMINO)PHENYL GLYCIDYL ETHER	Dermal	Rabbit	LD50 > 4,000 mg/kg
4-(DIGLYCIDYLAMINO)PHENYL GLYCIDYL ETHER	Ingestion	Rat	LD50 500-5000 mg/kg
EPICHLOROHYDRIN-PHENOL-FORMALDEHYDE RESIN	Dermal	Rat	LD50 > 2,000 mg/kg
EPICHLOROHYDRIN-PHENOL-FORMALDEHYDE RESIN	Ingestion	Rat	LD50 > 5,000 mg/kg
Bisphenol A Diglycidyl Ether	Dermal	Rat	LD50 > 1,600 mg/kg
Bisphenol A Diglycidyl Ether	Ingestion	Rat	LD50 > 1,000 mg/kg
Fused Silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
Fused Silica	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Fused Silica	Ingestion	Rat	LD50 > 5,110 mg/kg
Siloxanes and Silicones, di-Me, reaction products with silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
Siloxanes and Silicones, di-Me, reaction products with silica	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Siloxanes and Silicones, di-Me, reaction products with silica	Ingestion	Rat	LD50 > 5,110 mg/kg
Titanium Dioxide	Dermal	Rabbit	LD50 > 10,000 mg/kg
Titanium Dioxide	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 6.82 mg/l
Titanium Dioxide	Ingestion	Rat	LD50 > 10,000 mg/kg
3-(trimethoxysilyl)propyl glycidyl ether	Dermal	Rabbit	LD50 4,000 mg/kg
3-(trimethoxysilyl)propyl glycidyl ether	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5.3 mg/l
3-(trimethoxysilyl)propyl glycidyl ether	Ingestion	Rat	LD50 7,010 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
4-(DIGLYCIDYLAMINO)PHENYL GLYCIDYL ETHER	Rabbit	Irritant
EPICHLOROHYDRIN-PHENOL-FORMALDEHYDE RESIN	Rabbit	Irritant
Bisphenol A Diglycidyl Ether	Rabbit	Mild irritant
Fused Silica	Rabbit	No significant irritation
Siloxanes and Silicones, di-Me, reaction products with silica	Rabbit	No significant irritation
Titanium Dioxide	Rabbit	No significant irritation
3-(trimethoxysilyl)propyl glycidyl ether	Rabbit	Mild irritant

Serious Eye Damage/Irritation

Name	Species	Value
4-(DIGLYCIDYLAMINO)PHENYL GLYCIDYL ETHER	Rabbit	Severe irritant
EPICHLOROHYDRIN-PHENOL-FORMALDEHYDE RESIN	Rabbit	No significant irritation
Bisphenol A Diglycidyl Ether	Rabbit	Moderate irritant
Fused Silica	Rabbit	No significant irritation
Siloxanes and Silicones, di-Me, reaction products with silica	Rabbit	No significant irritation
Titanium Dioxide	Rabbit	No significant irritation
3-(trimethoxysilyl)propyl glycidyl ether	Rabbit	Corrosive

Sensitization:

Skin Sensitization

Name	Species	Value
4-(DIGLYCIDYLAMINO)PHENYL GLYCIDYL ETHER	Guinea pig	Sensitizing
EPICHLOROHYDRIN-PHENOL-FORMALDEHYDE RESIN	Multiple animal species	Sensitizing
Bisphenol A Diglycidyl Ether	Human and animal	Sensitizing
Fused Silica	Human and animal	Not classified
Siloxanes and Silicones, di-Me, reaction products with silica	Human and animal	Not classified
Titanium Dioxide	Human and animal	Not classified
3-(trimethoxysilyl)propyl glycidyl ether	Guinea pig	Not classified

Respiratory Sensitization

Name	Species	Value
Bisphenol A Diglycidyl Ether	Human	Not classified

Germ Cell Mutagenicity

Name	Route	Value
4-(DIGLYCIDYLAMINO)PHENYL GLYCIDYL ETHER	In Vitro	Some positive data exist, but the data are not sufficient for classification
4-(DIGLYCIDYLAMINO)PHENYL GLYCIDYL ETHER	In vivo	Mutagenic
EPICHLOROHYDRIN-PHENOL-FORMALDEHYDE RESIN	In vivo	Not mutagenic
EPICHLOROHYDRIN-PHENOL-FORMALDEHYDE RESIN	In Vitro	Some positive data exist, but the data are not sufficient for classification
Bisphenol A Diglycidyl Ether	In vivo	Not mutagenic
Bisphenol A Diglycidyl Ether	In Vitro	Some positive data exist, but the data are not sufficient for classification
Fused Silica	In Vitro	Not mutagenic
Siloxanes and Silicones, di-Me, reaction products with silica	In Vitro	Not mutagenic
Titanium Dioxide	In Vitro	Not mutagenic
Titanium Dioxide	In vivo	Not mutagenic
3-(trimethoxysilyl)propyl glycidyl ether	In vivo	Not mutagenic
3-(trimethoxysilyl)propyl glycidyl ether	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Bisphenol A Diglycidyl Ether	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
Fused Silica	Not Specified	Mouse	Some positive data exist, but the data are not sufficient for classification
Siloxanes and Silicones, di-Me, reaction products with silica	Not Specified	Mouse	Some positive data exist, but the data are not sufficient for classification
Titanium Dioxide	Ingestion	Multiple animal species	Not carcinogenic
Titanium Dioxide	Inhalation	Rat	Carcinogenic
3-(trimethoxysilyl)propyl glycidyl ether	Dermal	Mouse	Not carcinogenic

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
Bisphenol A Diglycidyl Ether	Ingestion	Not classified for female reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
Bisphenol A Diglycidyl Ether	Ingestion	Not classified for male reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
Bisphenol A Diglycidyl Ether	Dermal	Not classified for development	Rabbit	NOAEL 300 mg/kg/day	during organogenesis
Bisphenol A Diglycidyl Ether	Ingestion	Not classified for development	Rat	NOAEL 750 mg/kg/day	2 generation
Fused Silica	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Fused Silica	Inhalation	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Fused Silica	Ingestion	Not classified for development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
Siloxanes and Silicones, di-Me, reaction products with silica	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Siloxanes and Silicones, di-Me, reaction products with silica	Ingestion	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Siloxanes and Silicones, di-Me, reaction products with silica	Ingestion	Not classified for development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
3-(trimethoxysilyl)propyl glycidyl ether	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	1 generation
3-(trimethoxysilyl)propyl glycidyl ether	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	1 generation
3-(trimethoxysilyl)propyl glycidyl ether	Ingestion	Not classified for development	Rat	NOAEL 3,000 mg/kg/day	during organogenesis

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
EPICHLOROHYDRIN-PHENOL-FORMALDEHYDE RESIN	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
EPICHLOROHYDRIN-PHENOL-	Ingestion	heart | endocrine system |	Not classified	Rat	NOAEL 250 mg/kg/day	13 weeks

FORMALDEHYDE RESIN		gastrointestinal tract | bone, teeth, nails, and/or hair | hematopoietic system | liver | immune system | nervous system | eyes | kidney and/or bladder | respiratory system | vascular system				
Bisphenol A Diglycidyl Ether	Dermal	liver	Not classified	Rat	NOAEL 1,000 mg/kg/day	2 years
Bisphenol A Diglycidyl Ether	Dermal	nervous system	Not classified	Rat	NOAEL 1,000 mg/kg/day	13 weeks
Bisphenol A Diglycidyl Ether	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
Fused Silica	Inhalation	respiratory system | silicosis	Not classified	Human	NOAEL Not available	occupational exposure
Siloxanes and Silicones, di-Me, reaction products with silica	Inhalation	respiratory system | silicosis	Not classified	Human	NOAEL Not available	occupational exposure
Titanium Dioxide	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 0.01 mg/l	2 years
Titanium Dioxide	Inhalation	pulmonary fibrosis	Not classified	Human	NOAEL Not available	occupational exposure
3-(trimethoxysilyl)propyl glycidyl ether	Ingestion	heart | endocrine system | bone, teeth, nails, and/or hair | hematopoietic system | liver | immune system | nervous system | kidney and/or bladder | respiratory system	Not classified	Rat	NOAEL 1,000 mg/kg/day	28 days

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 labeling, 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 2: Toxic to aquatic life.

Chronic aquatic hazard:
GHS Chronic 2: Toxic to aquatic life with long lasting effects

No product test data available

Material	Cas #	Organism	Type	Exposure	Test Endpoint	Test Result
4-(DIGLYCIDYLAMINO)PHENYL GLYCIDYL ETHER	5026-74-4	Water flea	Analogous Compound	48 hours	EC50	18 mg/l
4-(DIGLYCIDYLAMINO)PHENYL GLYCIDYL ETHER	5026-74-4	Bacteria	Experimental	16 hours	EC50	>=10 mg/l
4-(DIGLYCIDYLAMINO)PHENYL GLYCIDYL ETHER	5026-74-4	Common Carp	Experimental	96 hours	LC50	4.2 mg/l
4-(DIGLYCIDYLAMINO)PHENYL GLYCIDYL ETHER	5026-74-4	Green algae	Experimental	96 hours	ErC50	13 mg/l
4-(DIGLYCIDYLAMINO)PHENYL GLYCIDYL ETHER	5026-74-4	Green algae	Experimental	96 hours	NOEC	4.2 mg/l
4-(DIGLYCIDYLAMINO)PHENYL GLYCIDYL ETHER	5026-74-4	Water flea	Experimental	21 days	NOEC	0.42 mg/l
EPICHLOROHYDRIN-PHENOL-FORMALDEHYDE RESIN	9003-36-5	Green algae	Experimental	72 hours	EC50	>1.8 mg/l
EPICHLOROHYDRIN-PHENOL-FORMALDEHYDE RESIN	9003-36-5	Rainbow Trout	Experimental	96 hours	LC50	0.55 mg/l
EPICHLOROHYDRIN-PHENOL-FORMALDEHYDE RESIN	9003-36-5	Water flea	Experimental	48 hours	EC50	1.6 mg/l
EPICHLOROHYDRIN-PHENOL-FORMALDEHYDE RESIN	9003-36-5	Water flea	Analogous Compound	21 days	NOEC	0.3 mg/l
EPICHLOROHYDRIN-PHENOL-FORMALDEHYDE RESIN	9003-36-5	Activated sludge	Analogous Compound	3 hours	IC50	>100 mg/l
Bisphenol A Diglycidyl Ether	1675-54-3	Activated sludge	Estimated	3 hours	IC50	>100 mg/l
Bisphenol A Diglycidyl Ether	1675-54-3	Rainbow Trout	Estimated	96 hours	LC50	2 mg/l
Bisphenol A Diglycidyl Ether	1675-54-3	Water flea	Estimated	48 hours	EC50	1.8 mg/l
Bisphenol A Diglycidyl Ether	1675-54-3	Green algae	Experimental	72 hours	EC50	>11 mg/l
Bisphenol A Diglycidyl Ether	1675-54-3	Green algae	Experimental	72 hours	NOEC	4.2 mg/l
Bisphenol A	1675-54-3	Water flea	Experimental	21 days	NOEC	0.3 mg/l

Diglycidyl Ether						
Fused Silica	60676-86-0	Common Carp	Experimental	72 hours	LC50	>10,000 mg/l
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Titanium Dioxide	13463-67-7	Activated sludge	Experimental	3 hours	NOEC	>=1,000 mg/l
Titanium Dioxide	13463-67-7	Diatom	Experimental	72 hours	EC50	>10,000 mg/l
Titanium Dioxide	13463-67-7	Fathead Minnow	Experimental	96 hours	LC50	>100 mg/l
Titanium Dioxide	13463-67-7	Water flea	Experimental	48 hours	EC50	>100 mg/l
Titanium Dioxide	13463-67-7	Diatom	Experimental	72 hours	NOEC	5,600 mg/l
3-(trimethoxysilyl)propyl glycidyl ether	2530-83-8	Common Carp	Experimental	96 hours	LC50	55 mg/l
3-(trimethoxysilyl)propyl glycidyl ether	2530-83-8	Green algae	Experimental	96 hours	ErC50	350 mg/l
3-(trimethoxysilyl)propyl glycidyl ether	2530-83-8	Invertebrate	Experimental	48 hours	LC50	324 mg/l
3-(trimethoxysilyl)propyl glycidyl ether	2530-83-8	Green algae	Experimental	96 hours	NOEC	130 mg/l
3-(trimethoxysilyl)propyl glycidyl ether	2530-83-8	Water flea	Experimental	21 days	NOEC	100 mg/l
3-(trimethoxysilyl)propyl glycidyl ether	2530-83-8	Activated sludge	Experimental	3 hours	EC50	>100 mg/l

12.2. Persistence and degradability

Material	CAS No.	Test Type	Duration	Study Type	Test Result	Protocol
4-(DIGLYCIDYLAMINO)PHENYL GLYCIDYL ETHER	5026-74-4	Experimental Biodegradation	29 days	Carbon dioxide evolution	≤10 %CO2 evolution/THCO2 evolution	OECD 301B - Mod. Sturm or CO2
4-(DIGLYCIDYLAMINO)PHENYL GLYCIDYL ETHER	5026-74-4	Experimental Hydrolysis		Hydrolytic half-life (pH 7)	4.1 days (t 1/2)	OECD 111 Hydrolysis func of pH
EPICHLOROHYDRIN-PHENOL-FORMALDEHYDE RESIN	9003-36-5	Experimental Biodegradation	28 days	Biological Oxygen Demand	0 %BOD/ThOD	EC C.4.E Closed Bottle Test
EPICHLOROHYDRIN-PHENOL-FORMALDEHYDE RESIN	9003-36-5	Analogous Compound Hydrolysis		Hydrolytic half-life (pH 7)	86 hours (t 1/2)	OECD 111 Hydrolysis func of pH
Bisphenol A Diglycidyl Ether	1675-54-3	Experimental Biodegradation	28 days	Biological Oxygen Demand	5 %BOD/COD	OECD 301F - Manometric Respiro
Bisphenol A Diglycidyl Ether	1675-54-3	Experimental Hydrolysis		Hydrolytic half-life	117 hours (t 1/2)	
Fused Silica	60676-86-0	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Titanium Dioxide	13463-67-7	Data not availbl-insufficient	N/A	N/A	N/A	N/A

3-(trimethoxysilyl)propyl glycidyl ether	2530-83-8	Experimental Biodegradation	28 days	Dissolv. Organic Carbon Deplet	37 %removal of DOC	EC C.4.A. DOC Die-Away Test
3-(trimethoxysilyl)propyl glycidyl ether	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 No.	Test Type	Duration	Study Type	Test Result	Protocol
4-(DIGLYCIDYLAMINO)PHENYL GLYCIDYL ETHER	5026-74-4	Modeled Bioconcentration		Log of Octanol/H2O part. coeff	0.87	Episuite™
EPICHLOROHYDRIN-PHENOL-FORMALDEHYDE RESIN	9003-36-5	Experimental Bioconcentration		Log of Octanol/H2O part. coeff	3.6	OECD 117 log Kow HPLC method
Bisphenol A Diglycidyl Ether	1675-54-3	Experimental Bioconcentration		Log of Octanol/H2O part. coeff	3.242	
Fused Silica	60676-86-0	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Titanium Dioxide	13463-67-7	Experimental BCF - Fish	42 days	Bioaccumulation Factor	9.6	
3-(trimethoxysilyl)propyl glycidyl ether	2530-83-8	Experimental Bioconcentration		Log of Octanol/H2O part. coeff	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

According to the Environmental Quality (Scheduled Wastes) Regulations 2005, scheduled waste has to be sent to a prescribed premise for recycling, treatment or disposal. Please approach Kualiti Alam for proper schedule waste classification and disposal.

SECTION 14: Transport Information

Not hazardous for transportation.

Marine Transport (IMDG)

UN Number: None assigned.
Proper Shipping Name: None assigned.
Technical Name: None assigned.
Hazard Class/Division: None assigned.
Subsidiary Risk: None assigned.

Packing Group: None assigned.
Limited Quantity: None assigned.
Marine Pollutant: None assigned.
Marine Pollutant Technical Name: None assigned.
Other Dangerous Goods Descriptions:
None assigned.

Air Transport (IATA)

UN Number: None assigned.
Proper Shipping Name: None assigned.
Technical Name: None assigned.
Hazard Class/Division: None assigned.
Subsidiary Risk: None assigned.
Packing Group: None assigned.
Limited Quantity: None assigned.
Marine Pollutant: None assigned.
Marine Pollutant Technical Name: None assigned.
Other Dangerous Goods Descriptions:
None assigned.

Transportation classifications are provided as a customer service. As for shipping, YOU remain responsible for complying with all applicable laws and regulations, including proper transportation classification and packaging. 3M's transportation classifications are based on product formulation, packaging, 3M policies and 3M's understanding of applicable current regulations. 3M does not guarantee the accuracy of this classification information. This information applies only to transportation classification and not the packaging, labeling or marking requirements. The above information is only for reference. If you are shipping by air or ocean, YOU are advised to check & meet applicable regulatory requirements.

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 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

DISCLAIMER: The information in this Safety Data Sheet (SDS) 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 SDS or use of the product in combination with other materials. For these reasons, it is important that customers carry out their own evaluation to satisfy themselves as to the suitability of the product for their own intended applications. In addition, this SDS is being provided to convey health and safety information. If you are the importer of record of this product into Malaysia, you are responsible for all applicable regulatory requirements, including, but not limited to, product registrations/notifications, substance volume tracking, and potential substance registration/notification.

3M Malaysia SDSs are available at www.3M.com.my

Safety Data Sheet

Document Group:	09-0180-1	**Version Number:**	5.00
Issue Date:	23/05/2023	**Supercedes Date:**	11/06/2021

This Safety Data Sheet has been prepared in accordance with the Malaysia Occupational Safety and Health (Chemical Classification, Labelling and Safety Data Sheets) Regulations 2013.

SECTION 1: Identification

1.1. Product identifier
3M™ Scotch-Weld™ Epoxy Structural Adhesive DP-760 Off-White : Part A

Product Identification Numbers
FJ-9251-0340-2 UU-0105-3888-0

1.2. Recommended use and restrictions on use

Recommended use
Part A of a non-sag, two-part room temperature curing adhesive designed for use when high temperature resistance is required., Structural adhesive

1.3. Supplier's details
ADDRESS: 3M Malaysia Sdn. Bhd., Level 8, Block F, Oasis Square, No.2, Jalan PJU 1A/7A, Ara Damansara 47301 Petaling, Jaya, Selangor
Telephone: 03-7884 2888
E Mail: 3mmyehsr@mmm.com
Website: www.3M.com.my

1.4. Emergency telephone number
+60 03-7884 2888

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture
Acute Toxicity (oral): Category 4.
Acute Toxicity (dermal): Category 4.
Skin Corrosion/Irritation: Category 1.
Serious Eye Damage/Irritation: Category 1.
Skin Sensitizer: Category 1.
Chronic Aquatic Toxicity: Category 2.

2.2. Label elements
Signal word
Danger

Symbols
Corrosion |Exclamation mark |Environment |

Pictograms

Hazard Statements:

H302 + H312	Harmful if swallowed or in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention:

P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P273	Avoid release to the environment.
P280D	Wear protective gloves, protective clothing, and eye/face protection.

Response:

P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor/physician.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.

Disposal:

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

2.3. Other hazards
May cause chemical gastrointestinal burns., Persons previously sensitized to amines may develop a cross-sensitization reaction to certain other amines.

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	C.A.S. No.	% by Wt
TRIETHYLENETETRAMINE	112-24-3	40 - 50
Amine terminated adduct	None	40 - 50
Oxide glass chemicals	65997-17-3	5 - 10
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	1 - 3
Titanium Dioxide	13463-67-7	1 - 3
Octadecanoic acid, 12-hydroxy-, reaction products with decanoic acid and ethylenediamine	None	< 1.5
Reaction mass of 12-hydroxy-N-[2-[(1-	None	< 1.5

oxodecyl)amino]alkyl]octadecanamide, 12-hydroxy-N-[2-[(1-oxooctyl)amino]alkyl]octadecanamide and N,N'-1,2-alkandiylbis[12-hydroxyoctadecanamide]		

SECTION 4: First aid measures

4.1. Description of first aid measures

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

Skin Contact:
Immediately flush with large amounts of water for at least 15 minutes. Remove contaminated clothing. Get immediate medical attention. Wash clothing before reuse.

Eye Contact:
Immediately flush with large amounts of water for at least 15 minutes. Remove contact lenses if easy to do. Continue rinsing. Immediately get medical attention.

If Swallowed:
Rinse mouth. Do not induce vomiting. Get immediate medical attention.

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

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

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

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media
In case of fire: Use a carbon dioxide or 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

Substance	Condition
Aldehydes	During Combustion
Amine Compounds	During Combustion
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Hydrogen Chloride	During Combustion
Oxides of Nitrogen	During Combustion

5.3. Special protective actions for fire-fighters
When fire fighting conditions are severe and total thermal decomposition of the product is possible, 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.

6.3. Methods and material for containment and cleaning up
Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue. 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
For industrial/occupational use only. Not for consumer sale or use. Do not use in a confined area with minimal air exchange. Do not breathe dust/fume/gas/mist/vapors/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
Keep container tightly closed to prevent contamination with water or air. If contamination is suspected, do not reseal container. Store away from heat. Store away from acids. Store away from strong bases.

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	C.A.S. No.	Agency	Limit type	Additional Comments
DUST, INERT OR NUISANCE	13463-67-7	Malaysia OELs	TWA (proposed)(respirable particles)(8 hours):3 mg/m3;TWA (proposed)(Inhalable particulate)(8 hours):10 mg/m3	
Titanium Dioxide	13463-67-7	ACGIH	TWA(Respirable nanoscale particles):0.2 mg/m3;TWA(Respirable finescale particles):2.5 mg/m3	A3: Confirmed animal carcin.
Titanium Dioxide	13463-67-7	Malaysia OELs	TWA(8 hours):10 mg/m3	
CERAMIC FIBERS	65997-17-3	ACGIH	TWA(as fiber):0.2 fiber/cc	A2: Suspected human carcin.
CONTINUOUS FILAMENT GLASS FIBERS	65997-17-3	ACGIH	TWA(as fiber):1 fiber/cc	A4: Not class. as human carcin
CONTINUOUS FILAMENT GLASS FIBERS, INHALABLE FRACTION	65997-17-3	ACGIH	TWA(inhalable fraction):5 mg/m3	A4: Not class. as human carcin
GLASS FILAMENTS	65997-17-3	Malaysia OELs	TWA(inhalable fraction)(8 hours):5 mg/m3;TWA(as fiber)(8 hours):1 fibers/ml	
GLASS WOOL FIBERS	65997-17-3	ACGIH	TWA(as fiber):1 fiber/cc	A3: Confirmed animal

				carcin.
Oxide glass chemicals	65997-17-3	Manufacturer determined	TWA(as non-fibrous, respirable)(8 hours):3 mg/m3;TWA(as non-fibrous, inhalable fraction)(8 hours):10 mg/m3	
ROCK WOOL FIBERS	65997-17-3	ACGIH	TWA(as fiber):1 fiber/cc	A3: Confirmed animal carcin.
SLAG WOOL FIBERS	65997-17-3	ACGIH	TWA(as fiber):1 fiber/cc	A3: Confirmed animal carcin.
SPECIAL PURPOSE GLASS FIBERS	65997-17-3	ACGIH	TWA(as fiber):1 fiber/cc	A3: Confirmed animal carcin.

ACGIH : American Conference of Governmental Industrial Hygienists
CMRG : Chemical Manufacturer's Recommended Guidelines
Malaysia OELs : Malaysia. Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to Health) Regulations
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/vapors/spray. If ventilation is not adequate, use respiratory protection equipment.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

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

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: Butyl Rubber
Fluoroelastomer
Neoprene

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 – Butyl rubber
Apron - Neoprene

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 vapors 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	Solid
Specific Physical Form:	Paste
Color	Off-White
Odor	Amine
Odor threshold	*No Data Available*
pH	*Not Applicable*
Melting point/Freezing point	*Not Applicable*
Boiling point/Initial boiling point/Boiling range	*Not Applicable*
Flash Point	>=100 ºC [*Test Method:*Closed Cup]
Evaporation rate	*No Data Available*
Flammability (solid, gas)	Not Classified
Flammable Limits(LEL)	*No Data Available*
Flammable Limits(UEL)	*No Data Available*
Vapor Pressure	*Not Applicable*
Vapor Density and/or Relative Vapor Density	*Not Applicable*
Density	0.79 - 0.85 g/ml
Relative Density	0.79 - 0.85 [*Ref Std:*WATER=1]
Water solubility	*No Data Available*
Solubility- non-water	*No Data Available*
Partition coefficient: n-octanol/ water	*No Data Available*
Autoignition temperature	*Not Applicable*
Decomposition temperature	*No Data Available*
Viscosity/Kinematic Viscosity	*No Data Available*
Volatile Organic Compounds	*No Data Available*
Percent volatile	1 % weight
VOC Less H2O & Exempt Solvents	*No Data Available*
Molecular weight	*No Data Available*

SECTION 10: Stability and reactivity

10.1. Reactivity
This material is considered to be non reactive under normal use conditions.

10.2. Chemical stability
Stable.

10.3. Possibility of hazardous reactions
Hazardous polymerization will not occur.

10.4. Conditions to avoid
Heat

10.5. Incompatible materials
Strong bases
Water

10.6. Hazardous decomposition products

Substance	Condition

None known.

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, 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:
Harmful in contact with skin. Corrosive (Skin Burns): Signs/symptoms may include localized redness, swelling, itching, intense pain, blistering, ulceration, and tissue destruction.

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

May cause additional health effects (see below).

Eye Contact:
Corrosive (Eye Burns): Signs/symptoms may include cloudy appearance of the cornea, chemical burns, severe pain, tearing, ulcerations, significantly impaired vision or complete loss of vision.

Ingestion:
Harmful if swallowed. Gastrointestinal Corrosion: Signs/symptoms may include severe mouth, throat and abdominal pain; nausea; vomiting; and diarrhea; blood in the feces and/or vomitus may also be seen.

May cause additional health effects (see below).

Additional Information:
Persons previously sensitized to amines may develop a cross-sensitization 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 >1,000 - =2,000 mg/kg
Overall product	Ingestion		No data available; calculated ATE >300 - =2,000 mg/kg
TRIETHYLENETETRAMINE	Dermal	Rabbit	LD50 1,465 mg/kg
TRIETHYLENETETRAMINE	Ingestion	Rat	LD50 1,591 mg/kg
Oxide glass chemicals	Dermal		LD50 estimated to be > 5,000 mg/kg

Oxide glass chemicals	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
Siloxanes and Silicones, di-Me, reaction products with silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
Titanium Dioxide	Dermal	Rabbit	LD50 > 10,000 mg/kg
Siloxanes and Silicones, di-Me, reaction products with silica	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Siloxanes and Silicones, di-Me, reaction products with silica	Ingestion	Rat	LD50 > 5,110 mg/kg
Titanium Dioxide	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 6.82 mg/l
Titanium Dioxide	Ingestion	Rat	LD50 > 10,000 mg/kg
Octadecanoic acid, 12-hydroxy-, reaction products with decanoic acid and ethylenediamine	Dermal	Rat	LD50 > 2,000 mg/kg
Octadecanoic acid, 12-hydroxy-, reaction products with decanoic acid and ethylenediamine	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5.1 mg/l
Octadecanoic acid, 12-hydroxy-, reaction products with decanoic acid and ethylenediamine	Ingestion	Rat	LD50 > 2,000 mg/kg
Reaction mass of 12-hydroxy-N-[2-[(1-oxodecyl)amino]alkyl]octadecanamide, 12-hydroxy-N-[2-[(1-oxooctyl)amino]alkyl]octadecanamide and N,N'-1,2-alkandiylbis[12-hydroxyoctadecanamide]	Dermal	Rat	LD50 > 2,000
Reaction mass of 12-hydroxy-N-[2-[(1-oxodecyl)amino]alkyl]octadecanamide, 12-hydroxy-N-[2-[(1-oxooctyl)amino]alkyl]octadecanamide and N,N'-1,2-alkandiylbis[12-hydroxyoctadecanamide]	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 6.3
Reaction mass of 12-hydroxy-N-[2-[(1-oxodecyl)amino]alkyl]octadecanamide, 12-hydroxy-N-[2-[(1-oxooctyl)amino]alkyl]octadecanamide and N,N'-1,2-alkandiylbis[12-hydroxyoctadecanamide]	Ingestion	Rat	LD50 > 2,000

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
TRIETHYLENETETRAMINE	Rabbit	Corrosive
Oxide glass chemicals	Professional judgement	No significant irritation
Siloxanes and Silicones, di-Me, reaction products with silica	Rabbit	No significant irritation
Titanium Dioxide	Rabbit	No significant irritation
Octadecanoic acid, 12-hydroxy-, reaction products with decanoic acid and ethylenediamine	Rabbit	No significant irritation
Reaction mass of 12-hydroxy-N-[2-[(1-oxodecyl)amino]alkyl]octadecanamide, 12-hydroxy-N-[2-[(1-oxooctyl)amino]alkyl]octadecanamide and N,N'-1,2-alkandiylbis[12-hydroxyoctadecanamide]	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
TRIETHYLENETETRAMINE	Rabbit	Corrosive
Oxide glass chemicals	Professional judgement	No significant irritation
Siloxanes and Silicones, di-Me, reaction products with silica	Rabbit	No significant irritation
Titanium Dioxide	Rabbit	No significant irritation
Octadecanoic acid, 12-hydroxy-, reaction products with decanoic acid and ethylenediamine	Rabbit	No significant irritation
Reaction mass of 12-hydroxy-N-[2-[(1-oxodecyl)amino]alkyl]octadecanamide, 12-hydroxy-N-[2-[(1-oxooctyl)amino]alkyl]octadecanamide and N,N'-1,2-alkandiylbis[12-hydroxyoctadecanamide]	Rabbit	Mild irritant

Sensitization:

Skin Sensitization

Name	Species	Value
TRIETHYLENETETRAMINE	Guinea pig	Sensitizing
Siloxanes and Silicones, di-Me, reaction products with silica	Human and animal	Not classified
Titanium Dioxide	Human and animal	Not classified
Octadecanoic acid, 12-hydroxy-, reaction products with decanoic acid and ethylenediamine	Mouse	Not classified
Reaction mass of 12-hydroxy-N-[2-[(1-oxodecyl)amino]alkyl]octadecanamide, 12-hydroxy-N-[2-[(1-oxooctyl)amino]alkyl]octadecanamide and N,N'-1,2-alkandiylbis[12-hydroxyoctadecanamide]	Mouse	Not classified

Respiratory Sensitization

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

Germ Cell Mutagenicity

Name	Route	Value
TRIETHYLENETETRAMINE	In vivo	Not mutagenic
TRIETHYLENETETRAMINE	In Vitro	Some positive data exist, but the data are not sufficient for classification
Oxide glass chemicals	In Vitro	Some positive data exist, but the data are not sufficient for classification
Siloxanes and Silicones, di-Me, reaction products with silica	In Vitro	Not mutagenic
Titanium Dioxide	In Vitro	Not mutagenic
Titanium Dioxide	In vivo	Not mutagenic
Octadecanoic acid, 12-hydroxy-, reaction products with decanoic acid and ethylenediamine	In Vitro	Not mutagenic
Reaction mass of 12-hydroxy-N-[2-[(1-oxodecyl)amino]alkyl]octadecanamide, 12-hydroxy-N-[2-[(1-oxooctyl)amino]alkyl]octadecanamide and N,N'-1,2-alkandiylbis[12-hydroxyoctadecanamide]	In Vitro	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
TRIETHYLENETETRAMINE	Dermal	Mouse	Not carcinogenic
Oxide glass chemicals	Inhalation	Multiple animal species	Some positive data exist, but the data are not sufficient for classification
Siloxanes and Silicones, di-Me, reaction products with silica	Not Specified	Mouse	Some positive data exist, but the data are not sufficient for classification
Titanium Dioxide	Ingestion	Multiple animal species	Not carcinogenic
Titanium Dioxide	Inhalation	Rat	Carcinogenic

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
TRIETHYLENETETRAMINE	Ingestion	Not classified for development	Rat	NOAEL 750 mg/kg/day	during organogenesis
Siloxanes and Silicones, di-Me, reaction products with silica	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Siloxanes and Silicones, di-Me, reaction products with silica	Ingestion	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Siloxanes and Silicones, di-Me, reaction	Ingestion	Not classified for development	Rat	NOAEL	during

products with silica				1,350 mg/kg/day	organogenesis
Reaction mass of 12-hydroxy-N-[2-[(1-oxodecyl)amino]alkyl]octadecanamide, 12-hydroxy-N-[2-[(1-oxooctyl)amino]alkyl]octadecanamide and N,N'-1,2-alkandiylbis[12-hydroxyoctadecanamide]	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	premating into lactation
Reaction mass of 12-hydroxy-N-[2-[(1-oxodecyl)amino]alkyl]octadecanamide, 12-hydroxy-N-[2-[(1-oxooctyl)amino]alkyl]octadecanamide and N,N'-1,2-alkandiylbis[12-hydroxyoctadecanamide]	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	28 days
Reaction mass of 12-hydroxy-N-[2-[(1-oxodecyl)amino]alkyl]octadecanamide, 12-hydroxy-N-[2-[(1-oxooctyl)amino]alkyl]octadecanamide and N,N'-1,2-alkandiylbis[12-hydroxyoctadecanamide]	Ingestion	Not classified for development	Rat	NOAEL 1,000 mg/kg/day	premating into lactation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
TRIETHYLENETETRAMINE	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Oxide glass chemicals	Inhalation	respiratory system	Not classified	Human	NOAEL not available	occupational exposure
Siloxanes and Silicones, di-Me, reaction products with silica	Inhalation	respiratory system | silicosis	Not classified	Human	NOAEL Not available	occupational exposure
Titanium Dioxide	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 0.01 mg/l	2 years
Titanium Dioxide	Inhalation	pulmonary fibrosis	Not classified	Human	NOAEL Not available	occupational exposure

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 labeling, 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 2: Toxic to aquatic life.

Chronic aquatic hazard:
GHS Chronic 2: Toxic to aquatic life with long lasting effects

No product test data available

Material	Cas #	Organism	Type	Exposure	Test Endpoint	Test Result
TRIETHYLENETETRAMINE	112-24-3	Fathead Minnow	Experimental	96 hours	LC50	330 mg/l
TRIETHYLENETETRAMINE	112-24-3	Green algae	Experimental	72 hours	ErC50	20 mg/l
TRIETHYLENETETRAMINE	112-24-3	Water flea	Experimental	48 hours	EC50	31.1 mg/l
TRIETHYLENETETRAMINE	112-24-3	Green algae	Experimental	72 hours	ErC10	1.34 mg/l
TRIETHYLENETETRAMINE	112-24-3	Water flea	Experimental	21 days	EC10	1.9 mg/l
TRIETHYLENETETRAMINE	112-24-3	Bacteria	Experimental	2 hours	EC50	15.7 mg/l
TRIETHYLENETETRAMINE	112-24-3	Redworm	Experimental	56 days	EC10	31.1 mg/l
TRIETHYLENETETRAMINE	112-24-3	Soil microbes	Experimental	28 days	EC50	>100 mg/kg (Dry Weight)
Oxide glass chemicals	65997-17-3	Green algae	Experimental	72 hours	EC50	>1,000 mg/l
Oxide glass chemicals	65997-17-3	Water flea	Experimental	72 hours	EC50	>1,000 mg/l
Oxide glass chemicals	65997-17-3	Zebra Fish	Experimental	96 hours	LC50	>1,000 mg/l
Oxide glass chemicals	65997-17-3	Green algae	Experimental	72 hours	NOEC	>=1,000 mg/l
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Titanium Dioxide	13463-67-7	Activated sludge	Experimental	3 hours	NOEC	>=1,000 mg/l
Titanium Dioxide	13463-67-7	Diatom	Experimental	72 hours	EC50	>10,000 mg/l
Titanium Dioxide	13463-67-7	Fathead Minnow	Experimental	96 hours	LC50	>100 mg/l
Titanium Dioxide	13463-67-7	Water flea	Experimental	48 hours	EC50	>100 mg/l
Titanium Dioxide	13463-67-7	Diatom	Experimental	72 hours	NOEC	5,600 mg/l
Octadecanoic acid, 12-hydroxy-, reaction products with decanoic acid and ethylenediamine	None	Activated sludge	Experimental	3 hours	EC50	>1,000 mg/l
Octadecanoic acid, 12-hydroxy-, reaction products with decanoic acid and ethylenediamine	None	Green algae	Experimental	72 hours	ErC50	43.2 mg/l
Octadecanoic acid, 12-hydroxy-, reaction products with decanoic acid and ethylenediamine	None	Rainbow Trout	Experimental	96 hours	LC50	>=100 mg/l
Octadecanoic acid, 12-hydroxy-, reaction products with decanoic acid and ethylenediamine	None	Water flea	Experimental	48 hours	EC50	94.9 mg/l
Octadecanoic acid, 12-hydroxy-,	None	Green algae	Experimental	72 hours	NOEC	20.7 mg/l

reaction products with decanoic acid and ethylenediamine						
Octadecanoic acid, 12-hydroxy-, reaction products with decanoic acid and ethylenediamine	None	Water flea	Experimental	21 days	NOEL	>=20 mg/l
Reaction mass of 12-hydroxy-N-[2-[(1-oxodecyl)amino]alkyl]octadecanamide, 12-hydroxy-N-[2-[(1-oxooctyl)amino]alkyl]octadecanamide and N,N'-1,2-alkandiylbis[12-hydroxyoctadecanamide]	None	Water flea	Endpoint not reached	48 hours	EC50	>100 mg/l
Reaction mass of 12-hydroxy-N-[2-[(1-oxodecyl)amino]alkyl]octadecanamide, 12-hydroxy-N-[2-[(1-oxooctyl)amino]alkyl]octadecanamide and N,N'-1,2-alkandiylbis[12-hydroxyoctadecanamide]	None	Activated sludge	Experimental	3 hours	EC50	>100 mg/l
Reaction mass of 12-hydroxy-N-[2-[(1-oxodecyl)amino]alkyl]octadecanamide, 12-hydroxy-N-[2-[(1-oxooctyl)amino]alkyl]octadecanamide and N,N'-1,2-alkandiylbis[12-hydroxyoctadecanamide]	None	Common Carp	Experimental	96 hours	No tox obs at lmt of water sol	>100 mg/l
Reaction mass of 12-hydroxy-N-[2-[(1-oxodecyl)amino]alkyl]octadecanamide, 12-hydroxy-N-[2-[(1-oxooctyl)amino]alkyl]octadecanamide and N,N'-1,2-alkandiylbis[12-hydroxyoctadecanamide]	None	Green algae	Experimental	72 hours	EC50	0.025 mg/l
Reaction mass of 12-hydroxy-N-[2-[(1-oxodecyl)amino]alkyl]octadecanamide, 12-hydroxy-N-[2-[(1-	None	Water flea	Endpoint not reached	21 days	NOEC	>100 mg/l

oxooctyl)amino]alkyl]octadecanamide and N,N'-1,2-alkandiylbis[12-hydroxyoctadecanamide]						
Reaction mass of 12-hydroxy-N-[2-[(1-oxodecyl)amino]alkyl]octadecanamide, 12-hydroxy-N-[2-[(1-oxooctyl)amino]alkyl]octadecanamide and N,N'-1,2-alkandiylbis[12-hydroxyoctadecanamide]	None	Green algae	Experimental	72 hours	NOEC	0.007 mg/l

12.2. Persistence and degradability

Material	CAS No.	Test Type	Duration	Study Type	Test Result	Protocol
TRIETHYLENETETRAMINE	112-24-3	Experimental Aquatic Inherent Biodegrad.	84 days	Dissolv. Organic Carbon Deplet	20 %removal of DOC	OECD 302A - Modified SCAS Test
Oxide glass chemicals	65997-17-3	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Titanium Dioxide	13463-67-7	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Octadecanoic acid, 12-hydroxy-, reaction products with decanoic acid and ethylenediamine	None	Experimental Biodegradation	28 days	Biological Oxygen Demand	14 %BOD/ThOD	OECD 301D - Closed Bottle Test
Reaction mass of 12-hydroxy-N-[2-[(1-oxodecyl)amino]alkyl]octadecanamide, 12-hydroxy-N-[2-[(1-oxooctyl)amino]alkyl]octadecanamide and N,N'-1,2-alkandiylbis[12-hydroxyoctadecanamide]	None	Experimental Biodegradation	28 days	Carbon dioxide evolution	7 %CO2 evolution/THCO2 evolution	OECD 301B - Mod. Sturm or CO2

12.3. Bioaccumulative potential

Material	CAS No.	Test Type	Duration	Study Type	Test Result	Protocol
TRIETHYLENETETRAMINE	112-24-3	Estimated Bioconcentration		Log of Octanol/H2O part. coeff	<-2	
Oxide glass chemicals	65997-17-3	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Titanium Dioxide	13463-67-7	Experimental BCF - Fish	42 days	Bioaccumulation Factor	9.6	
Octadecanoic acid, 12-hydroxy-, reaction products with decanoic acid and ethylenediamine	None	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Reaction mass of 12-hydroxy-N-[2-[(1-oxodecyl)amino]alkyl]octadecanamide, 12-hydroxy-N-[2-[(1-oxooctyl)amino]alkyl]octadecanamide and N,N'-1,2-alkandiylbis[12-hydroxyoctadecanamide]	None	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

12.4. Mobility in soil
Please contact manufacturer for more details

12.5 Other adverse effects
No information available

SECTION 13: Disposal considerations

13.1. Disposal methods

According to the Environmental Quality (Scheduled Wastes) Regulations 2005, scheduled waste has to be sent to a prescribed premise for recycling, treatment or disposal. Please approach Kualiti Alam for proper schedule waste classification and disposal.

SECTION 14: Transport Information

Marine Transport (IMDG)

UN Number:UN3259
Proper Shipping Name:AMINES, SOLID, CORROSIVE, N.O.S.
Technical Name:(Triethylenetetramine)
Hazard Class/Division:8
Subsidiary Risk: None assigned.
Packing Group:II
Limited Quantity: None assigned.
Marine Pollutant: None assigned.
Marine Pollutant Technical Name: None assigned.
Other Dangerous Goods Descriptions:
None assigned.

Air Transport (IATA)

UN Number:UN3259
Proper Shipping Name:AMINES, SOLID, CORROSIVE, N.O.S.

Technical Name:(Triethylenetetramine)
Hazard Class/Division:8
Subsidiary Risk: None assigned.
Packing Group:II
Limited Quantity: None assigned.
Marine Pollutant: None assigned.
Marine Pollutant Technical Name: None assigned.
Other Dangerous Goods Descriptions:
None assigned.

Transportation classifications are provided as a customer service. As for shipping, YOU remain responsible for complying with all applicable laws and regulations, including proper transportation classification and packaging. 3M's transportation classifications are based on product formulation, packaging, 3M policies and 3M's understanding of applicable current regulations. 3M does not guarantee the accuracy of this classification information. This information applies only to transportation classification and not the packaging, labeling or marking requirements. The above information is only for reference. If you are shipping by air or ocean, YOU are advised to check & meet applicable regulatory requirements.

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.

SECTION 16: Other information

DISCLAIMER: The information in this Safety Data Sheet (SDS) 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 SDS or use of the product in combination with other materials. For these reasons, it is important that customers carry out their own evaluation to satisfy themselves as to the suitability of the product for their own intended applications. In addition, this SDS is being provided to convey health and safety information. If you are the importer of record of this product into Malaysia, you are responsible for all applicable regulatory requirements, including, but not limited to, product registrations/notifications, substance volume tracking, and potential substance registration/notification.

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