

Epoxy Structural Adhesive Scotch-Weld™ DP410**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.

IDENTIFICATION**1.1. Product identifier**

Epoxy Structural Adhesive Scotch-Weld™ DP410

Product Identification Numbers

FJ-410C-0400-2	FJ-9251-0559-7	FJ-9600-0130-5	FJ-9600-0131-3	FJ-9600-0190-9
FJ-KITD-P410-4	FS-9100-1747-4	FS-9100-2873-7	FS-9100-2874-5	FS-9100-4026-0
FS-9100-4027-8	FS-9100-4028-6	HB-0042-8710-6	UU-0101-3327-8	UU-0101-3328-6

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:

07-7184-0, 18-9393-2

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.

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



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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-410 : Part A

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
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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

Serious Eye Damage/Irritation: Category 1.

Skin Corrosion/Irritation: Category 1.

Skin Sensitizer: Category 1.

Chronic Aquatic Toxicity: Category 3.

2.2. Label elements

Signal word

Danger

Symbols

Corrosion | Exclamation mark |

Pictograms



Hazard Statements

H314 Causes severe skin burns and eye damage.
 H317 May cause an allergic skin reaction.
 H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

General:

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

Prevention:

P260 Do not breathe dust/fume/gas/mist/vapors/spray.
 P280D Wear protective gloves, protective clothing, and eye/face protection.
 P280A Wear eye/face protection.
 P280E Wear protective gloves.
 P264 Wash thoroughly after handling.

Response:

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/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.
 P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

Storage:

P405 Store locked up.

Disposal:

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

2.3. Other hazards

May cause chemical gastrointestinal burns.

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	C.A.S. No.	% by Wt
BIS(3-AMINOPROPYL) ETHER OF DIETHYLENE GLYCOL	4246-51-9	40 - 70
4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROHYDRIN POLYMER	25068-38-6	15 - 30
CALCIUM NITRATE TETRAHYDRATE	13477-34-4	7 - 13
TRIS(2,4,6-DIMETHYLAMINOMONOMETHYL)PH	90-72-2	7 - 13

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ENOL		
BIS[(DIMETHYLAMINO)METHYL]PHE NOL	71074-89-0	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 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

See Section 11.1. Information on toxicological effects.

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

Not applicable

SECTION 5: Fire-fighting measures

5.1. 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
Amine Compounds
Carbon monoxide
Carbon dioxide
Hydrogen Chloride
Oxides of Nitrogen

Condition

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.

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

Avoid breathing of vapors created during cure cycle. For industrial/occupational use only. Not for consumer sale or use. 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

Store away from heat. Store away from acids.

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 SDS.

8.2. Exposure controls

8.2.1. Engineering controls

Curing enclosures must be exhausted to outdoors or to a suitable emission control device. 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.

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

In case of inadequate ventilation wear respiratory protection. An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure: Half facepiece or full facepiece air-purifying respirator suitable for organic 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:	Thixotropic paste
Appearance/Odor	Off-white paste; amine odor
Odor threshold	<i>No Data Available</i>
pH	<i>Not Applicable</i>
Melting point/Freezing point	<i>Not Applicable</i>
Boiling point/Initial boiling point/Boiling range	<i>Not Applicable</i>
Flash Point	≥100 °C [<i>Test Method: Closed Cup</i>]
Evaporation rate	<i>Not Applicable</i>
Flammability (solid, gas)	Not Classified
Flammable Limits(LEL)	<i>Not Applicable</i>
Flammable Limits(UEL)	<i>Not Applicable</i>
Vapor Pressure	<i>Not Applicable</i>
Vapor Density	<i>Not Applicable</i>
Density	1.09 - 1.12 g/ml
Relative Density	1.09 - 1.12 [<i>Ref Std: WATER=1</i>]
Water solubility	<i>No Data Available</i>
Solubility- non-water	<i>No Data Available</i>
Partition coefficient: n-octanol/ water	<i>No Data Available</i>
Autoignition temperature	<i>Not Applicable</i>
Decomposition temperature	<i>No Data Available</i>
Viscosity	<i>No Data Available</i>
Volatile Organic Compounds	<i>No Data Available</i>
Percent volatile	≤1 % weight

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
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

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:

May be 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.

Eye Contact:

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

Ingestion:

May be harmful if swallowed.

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

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 ATE2,000 - 5,000 mg/kg
Overall product	Ingestion		No data available; calculated ATE2,000 - 5,000 mg/kg
BIS(3-AMINOPROPYL) ETHER OF DIETHYLENE GLYCOL	Dermal	Rabbit	LD50 2,500 mg/kg

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BIS(3-AMINOPROPYL) ETHER OF DIETHYLENE GLYCOL	Ingestion	Rat	LD50 3,160 mg/kg
4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROXYDRIN POLYMER	Dermal	Rat	LD50 > 1,600 mg/kg
4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROXYDRIN POLYMER	Ingestion	Rat	LD50 > 1,000 mg/kg
CALCIUM NITRATE TETRAHYDRATE	Ingestion	Rat	LD50 >300, <2000 mg/kg
CALCIUM NITRATE TETRAHYDRATE	Dermal	similar compounds	LD50 > 2,000 mg/kg
TRIS(2,4,6-DIMETHYLAMINOMONOMETHYL)PHENOL	Dermal	Rat	LD50 1,280 mg/kg
TRIS(2,4,6-DIMETHYLAMINOMONOMETHYL)PHENOL	Ingestion	Rat	LD50 1,000 mg/kg
BIS[(DIMETHYLAMINO)METHYL]PHENOL	Ingestion		LD50 estimated to be 300 - 2,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
BIS(3-AMINOPROPYL) ETHER OF DIETHYLENE GLYCOL	Rabbit	Corrosive
4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROXYDRIN POLYMER	Rabbit	Mild irritant
CALCIUM NITRATE TETRAHYDRATE	similar compounds	No significant irritation
TRIS(2,4,6-DIMETHYLAMINOMONOMETHYL)PHENOL	Rabbit	Corrosive
BIS[(DIMETHYLAMINO)METHYL]PHENOL	similar compounds	Corrosive

Serious Eye Damage/Irritation

Name	Species	Value
BIS(3-AMINOPROPYL) ETHER OF DIETHYLENE GLYCOL	similar health hazards	Corrosive
4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROXYDRIN POLYMER	Rabbit	Moderate irritant
CALCIUM NITRATE TETRAHYDRATE	Rabbit	Corrosive
TRIS(2,4,6-DIMETHYLAMINOMONOMETHYL)PHENOL	Rabbit	Corrosive
BIS[(DIMETHYLAMINO)METHYL]PHENOL	similar compounds	Corrosive

Skin Sensitization

Name	Species	Value
4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROXYDRIN POLYMER	Human and animal	Sensitizing
CALCIUM NITRATE TETRAHYDRATE	similar compounds	Not classified
TRIS(2,4,6-DIMETHYLAMINOMONOMETHYL)PHENOL	Guinea pig	Not classified

Respiratory Sensitization

Name	Species	Value
4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROXYDRIN POLYMER	Human	Not classified

Germ Cell Mutagenicity

Name	Route	Value
4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROXYDRIN POLYMER	In vivo	Not mutagenic
4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROXYDRIN POLYMER	In Vitro	Some positive data exist, but the data are not sufficient for classification

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CALCIUM NITRATE TETRAHYDRATE	In Vitro	Not mutagenic
TRIS(2,4,6-DIMETHYLAMINOMONOMETHYL)PHENOL	In Vitro	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROXYDRIN POLYMER	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROXYDRIN POLYMER	Ingestion	Not classified for female reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROXYDRIN POLYMER	Ingestion	Not classified for male reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROXYDRIN POLYMER	Dermal	Not classified for development	Rabbit	NOAEL 300 mg/kg/day	during organogenesis
4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROXYDRIN POLYMER	Ingestion	Not classified for development	Rat	NOAEL 750 mg/kg/day	2 generation
CALCIUM NITRATE TETRAHYDRATE	Ingestion	Not classified for female reproduction	similar compound ds	NOAEL 1,500 mg/kg/day	prematuring into lactation
CALCIUM NITRATE TETRAHYDRATE	Ingestion	Not classified for male reproduction	similar compound ds	NOAEL 1,500 mg/kg/day	28 days
CALCIUM NITRATE TETRAHYDRATE	Ingestion	Not classified for development	similar compound ds	NOAEL 1,500 mg/kg/day	prematuring into lactation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
BIS(3-AMINOPROPYL) ETHER OF DIETHYLENE GLYCOL	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
CALCIUM NITRATE TETRAHYDRATE	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	
CALCIUM NITRATE TETRAHYDRATE	Ingestion	methemoglobinemia	Causes damage to organs	Human	NOAEL Not available	environmental exposure
TRIS(2,4,6-DIMETHYLAMINOMONOMETHYL)PHENOL	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROXYDRIN POLYMER	Dermal	liver	Not classified	Rat	NOAEL 1,000 mg/kg/day	2 years
4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROXYDRIN POLYMER	Dermal	nervous system	Not classified	Rat	NOAEL 1,000 mg/kg/day	13 weeks
4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROXYDRIN	Ingestion	auditory system heart endocrine system hematopoietic	Not classified	Rat	NOAEL 1,000 mg/kg/day	28 days

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POLYMER		system liver eyes kidney and/or bladder				
CALCIUM NITRATE TETRAHYDRATE	Ingestion	heart skin endocrine system bone, teeth, nails, and/or hair hematopoietic system liver immune system nervous system eyes kidney and/or bladder respiratory system vascular system	Not classified	similar compounds	NOAEL 1,500 mg/kg/day	28 days
TRIS(2,4,6-DIMETHYLAMINOMONOMETHYL)PHENOL	Dermal	skin liver nervous system auditory system hematopoietic system eyes	Not classified	Rat	NOAEL 125 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 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 #	Organism	Type	Exposure	Test Endpoint	Test Result
BIS(3-AMINOPROPYL) ETHER OF DIETHYLENE GLYCOL	4246-51-9	Golden Orfe	Experimental	96 hours	Lethal Concentration 50%	>1,000 mg/l
BIS(3-AMINOPROPYL) ETHER OF DIETHYLENE GLYCOL	4246-51-9	Green algae	Experimental	72 hours	Effect Concentration 50%	>500 mg/l
BIS(3-	4246-51-9	Water flea	Experimental	48 hours	Effect	220 mg/l

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AMINOPROPYL) ETHER OF DIETHYLENE GLYCOL					Concentration 50%	
BIS(3-AMINOPROPYL) ETHER OF DIETHYLENE GLYCOL	4246-51-9	Green algae	Experimental	72 hours	Effect Concentration 10%	5.4 mg/l
4,4'-ISOPROPYLDENEDIPHENOL-EPICHLOROHYDRIN POLYMER	25068-38-6	Water flea	Estimated	48 hours	Lethal Concentration 50%	0.95 mg/l
4,4'-ISOPROPYLDENEDIPHENOL-EPICHLOROHYDRIN POLYMER	25068-38-6	Green Algae	Experimental	72 hours	Effect Concentration 50%	>11 mg/l
4,4'-ISOPROPYLDENEDIPHENOL-EPICHLOROHYDRIN POLYMER	25068-38-6	Rainbow Trout	Experimental	96 hours	Lethal Concentration 50%	1.2 mg/l
4,4'-ISOPROPYLDENEDIPHENOL-EPICHLOROHYDRIN POLYMER	25068-38-6	Green Algae	Experimental	72 hours	No obs Effect Conc	4.2 mg/l
4,4'-ISOPROPYLDENEDIPHENOL-EPICHLOROHYDRIN POLYMER	25068-38-6	Water flea	Experimental	21 days	No obs Effect Conc	0.3 mg/l
CALCIUM NITRATE TETRAHYDRATE	13477-34-4	Guppy	Estimated	96 hours	Lethal Concentration 50%	1,378 mg/l
CALCIUM NITRATE TETRAHYDRATE	13477-34-4	Fathead Minnow	Estimated	30 days	No obs Effect Conc	58 mg/l
TRIS(2,4,6-	90-72-2	Common Carp	Experimental	96 hours	Lethal	175 mg/l

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DIMETHYLA MINOMONO METHYL)PH ENOL					Concentration 50%	
TRIS(2,4,6- DIMETHYLA MINOMONO METHYL)PH ENOL	90-72-2	Grass Shrimp	Experimental	96 hours	Lethal Concentration 50%	718 mg/l
TRIS(2,4,6- DIMETHYLA MINOMONO METHYL)PH ENOL	90-72-2	Green algae	Experimental	72 hours	Effect Concentration 50%	84 mg/l
TRIS(2,4,6- DIMETHYLA MINOMONO METHYL)PH ENOL	90-72-2	Green algae	Experimental	72 hours	No obs Effect Conc	6.25 mg/l
BIS[(DIMETH YLAMINO)M ETHYL]PHEN OL	71074-89-0		Data not available or insufficient for classification			

12.2. Persistence and degradability

Material	CAS No.	Test Type	Duration	Study Type	Test Result	Protocol
BIS(3- AMINOPROP YL) ETHER OF DIETHYLENE GLYCOL	4246-51-9	Experimental Biodegradation	25 days	Carbon dioxide evolution	-8 % weight	OECD 301B - Mod. Sturm or CO2
4,4'- ISOPROPYLI DENEDIPHEN OL- EPICHLOROH YDRIN POLYMER	25068-38-6	Estimated Hydrolysis		Hydrolytic half-life	<2 days (t 1/2)	Other methods
4,4'- ISOPROPYLI DENEDIPHEN OL- EPICHLOROH YDRIN POLYMER	25068-38-6	Experimental Biodegradation	28 days	Biological Oxygen Demand	0 % BOD/ThBOD	OECD 301C - MITI (I)
CALCIUM NITRATE TETRAHYDR ATE	13477-34-4	Data not availbl- insufficient			N/A	
TRIS(2,4,6- DIMETHYLA MINOMONO METHYL)PH	90-72-2	Experimental Biodegradation	28 days	Biological Oxygen Demand	4 % weight	OECD 301D - Closed Bottle Test

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ENOL						
BIS[(DIMETHYLAMINO)METHYL]PHENOL	71074-89-0	Estimated Biodegradation	28 days	Biological Oxygen Demand	20 % weight	OECD 301C - MITI (I)

12.3. Bioaccumulative potential

Material	CAS No.	Test Type	Duration	Study Type	Test Result	Protocol
BIS(3-AMINOPROPYL) ETHER OF DIETHYLENE GLYCOL	4246-51-9	Estimated Bioconcentration		Log of Octanol/H ₂ O part. coeff	-1.46	Est: Octanol-water part. coeff
4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROHYDRIN POLYMER	25068-38-6	Experimental BCF-Carp	28 days	Bioaccumulation Factor	<=42	OECD 305E-Bioaccum FI-thru fis
CALCIUM NITRATE TETRAHYDRATE	13477-34-4	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
TRIS(2,4,6-DIMETHYLAMINOMONOMETHYL)PHENOL	90-72-2	Experimental Bioconcentration		Log of Octanol/H ₂ O part. coeff	-0.66	Other methods
BIS[(DIMETHYLAMINO)METHYL]PHENOL	71074-89-0	Estimated Bioconcentration		Log of Octanol/H ₂ O part. coeff	-2.34	Est: Octanol-water part. coeff

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)**

3M™ Scotch-Weld™ Epoxy Structural Adhesive DP-410 : Part A

UN Number:UN3263

Proper Shipping Name:CORROSIVE SOLID, BASIC, ORGANIC, N.O.S.

Technical Name:(Bis(3-aminopropyl) ether of diethylene glycol)

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:UN3263

Proper Shipping Name:CORROSIVE SOLID, BASIC, ORGANIC, N.O.S.

Technical Name:(Bis(3-aminopropyl) ether of diethylene glycol)

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. The components of this product are in compliance with the chemical notification requirements of TSCA.

SECTION 16: Other information

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 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(tm) Scotch-Weld(tm) Epoxy Structural Adhesive DP-410 : Part B

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

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

Serious Eye Damage/Irritation: Category 2.

Skin Corrosion/Irritation: Category 2.

Skin Sensitizer: Category 1.

Chronic Aquatic Toxicity: Category 3.

2.2. Label elements

Signal word

Warning

Symbols

Exclamation mark |

Pictograms

3M(tm) Scotch-Weld(tm) Epoxy Structural Adhesive DP-410 : Part B



Hazard Statements

H319	Causes serious eye irritation.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H412	Harmful to aquatic life with long lasting effects.

Precautionary statements

General:

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

Prevention:

P280E	Wear protective gloves.
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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.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P332 + P313	If skin irritation occurs: Get medical advice/attention.

Disposal:

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

None known

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	C.A.S. No.	% by Wt
4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROHYDRIN POLYMER	25068-38-6	60 - 90
BUTYLATED EPOXY RESIN	71033-08-4	10 - 30
DIMETHYL SILOXANE, REACTION PRODUCT WITH SILICA	67762-90-7	1 - 5
3-(TRIMETHOXSILYL)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

See Section 11.1. Information on toxicological effects.

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

Not applicable

SECTION 5: Fire-fighting measures

5.1. 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
Carbon monoxide
Carbon dioxide
Irritant Vapors or Gases

Condition

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 dikes 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. 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

Avoid breathing of vapors created during cure cycle. 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. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.)

7.2. Conditions for safe storage including any incompatibilities

Store away from heat. Store away from acids. Store away from oxidizing 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 SDS.

8.2. Exposure controls

8.2.1. Engineering controls

Provide ventilated enclosure for heat curing. Curing enclosures must be exhausted to outdoors or to a suitable emission control device. 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 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
Specific Physical Form:	Paste
Appearance/Odor	Off white color; mild epoxy odor.
Odor threshold	No Data Available
pH	No Data Available
Melting point/Freezing point	Not Applicable
Boiling point/Initial boiling point/Boiling range	>=200 °C
Flash Point	> 93.3 °C [Test Method:Closed Cup]
Evaporation rate	Not Applicable
Flammability (solid, gas)	Not Applicable
Flammable Limits(LEL)	Not Applicable
Flammable Limits(UEL)	Not Applicable
Vapor Pressure	Not Applicable
Vapor Density	No Data Available
Density	1.13 g/ml
Relative Density	Approximately 1.15 g/ml [@ 23 °C] [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	>=60 Pa-s [@ 23 °C] [Test Method:Brookfield]
Volatile Organic Compounds	No Data Available
Percent volatile	<=1 % weight
VOC Less H2O & Exempt Solvents	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
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 oxidizing agents

10.6. Hazardous decomposition products

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

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

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

No health effects are expected.

Skin Contact:

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

Eye Contact:

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

Ingestion:

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

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 >5,000 mg/kg
4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROHYDRIN POLYMER	Dermal	Rat	LD50 > 1,600 mg/kg
4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROHYDRIN POLYMER	Ingestion	Rat	LD50 > 1,000 mg/kg
DIMETHYL SILOXANE, REACTION PRODUCT WITH SILICA	Dermal	Rabbit	LD50 > 5,000 mg/kg
DIMETHYL SILOXANE, REACTION PRODUCT WITH SILICA	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
DIMETHYL SILOXANE, REACTION PRODUCT WITH SILICA	Ingestion	Rat	LD50 > 5,110 mg/kg
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

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ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROXYDRIN POLYMER	Rabbit	Mild irritant
DIMETHYL SILOXANE, REACTION PRODUCT WITH SILICA	Rabbit	No significant irritation
3-(TRIMETHOXYSIYL)PROPYL GLYCIDYL ETHER	Rabbit	Mild irritant

Serious Eye Damage/Irritation

Name	Species	Value
4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROXYDRIN POLYMER	Rabbit	Moderate irritant
DIMETHYL SILOXANE, REACTION PRODUCT WITH SILICA	Rabbit	No significant irritation
3-(TRIMETHOXYSIYL)PROPYL GLYCIDYL ETHER	Rabbit	Corrosive

Skin Sensitization

Name	Species	Value
4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROXYDRIN POLYMER	Human and animal	Sensitizing
DIMETHYL SILOXANE, REACTION PRODUCT WITH SILICA	Human and animal	Not classified
3-(TRIMETHOXYSIYL)PROPYL GLYCIDYL ETHER	Guinea pig	Not classified

Respiratory Sensitization

Name	Species	Value
4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROXYDRIN POLYMER	Human	Not classified

Germ Cell Mutagenicity

Name	Route	Value
4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROXYDRIN POLYMER	In vivo	Not mutagenic
4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROXYDRIN POLYMER	In Vitro	Some positive data exist, but the data are not sufficient for classification
DIMETHYL SILOXANE, REACTION PRODUCT WITH SILICA	In Vitro	Not mutagenic
3-(TRIMETHOXYSIYL)PROPYL GLYCIDYL ETHER	In vivo	Not mutagenic
3-(TRIMETHOXYSIYL)PROPYL GLYCIDYL ETHER	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROXYDRIN POLYMER	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
DIMETHYL SILOXANE, REACTION PRODUCT WITH SILICA	Not Specified	Mouse	Some positive data exist, but the data are not sufficient for classification
3-(TRIMETHOXYSIYL)PROPYL GLYCIDYL ETHER	Dermal	Mouse	Not carcinogenic

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

Name	Route	Value	Species	Test Result	Exposure Duration
4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROXYDRIN POLYMER	Ingestion	Not classified for female reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROXYDRIN POLYMER	Ingestion	Not classified for male reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
4,4'-ISOPROPYLIDENEDIPHENOL-	Dermal	Not classified for development	Rabbit	NOAEL 300	during

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EPICHLOROXYDRIN POLYMER				mg/kg/day	organogenesis
4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROXYDRIN POLYMER	Ingestion	Not classified for development	Rat	NOAEL 750 mg/kg/day	2 generation
DIMETHYL SILOXANE, REACTION PRODUCT WITH SILICA	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
DIMETHYL SILOXANE, REACTION PRODUCT WITH SILICA	Ingestion	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
DIMETHYL SILOXANE, REACTION PRODUCT WITH SILICA	Ingestion	Not classified for development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
3-(TRIMETHOXY-SILYL)PROPYL GLYCIDYL ETHER	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	1 generation
3-(TRIMETHOXY-SILYL)PROPYL GLYCIDYL ETHER	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	1 generation
3-(TRIMETHOXY-SILYL)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

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'-ISOPROPYLIDENEDIPHENOL-EPICHLOROXYDRIN POLYMER	Dermal	liver	Not classified	Rat	NOAEL 1,000 mg/kg/day	2 years
4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROXYDRIN POLYMER	Dermal	nervous system	Not classified	Rat	NOAEL 1,000 mg/kg/day	13 weeks
4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROXYDRIN POLYMER	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
DIMETHYL SILOXANE, REACTION PRODUCT WITH SILICA	Inhalation	respiratory system silicosis	Not classified	Human	NOAEL Not available	occupational exposure
3-(TRIMETHOXY-SILYL)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 3: Harmful to aquatic life with long lasting effects

No product test data available

Material	Cas #	Organism	Type	Exposure	Test Endpoint	Test Result
4,4'-ISOPROPYLI DENEDIPHENOL-EPICHLOROH YDRIN POLYMER	25068-38-6	Water flea	Estimated	48 hours	Lethal Concentration 50%	0.95 mg/l
4,4'-ISOPROPYLI DENEDIPHENOL-EPICHLOROH YDRIN POLYMER	25068-38-6	Green Algae	Experimental	72 hours	Effect Concentration 50%	>11 mg/l
4,4'-ISOPROPYLI DENEDIPHENOL-EPICHLOROH YDRIN POLYMER	25068-38-6	Rainbow Trout	Experimental	96 hours	Lethal Concentration 50%	1.2 mg/l
4,4'-ISOPROPYLI DENEDIPHENOL-EPICHLOROH YDRIN POLYMER	25068-38-6	Green Algae	Experimental	72 hours	No obs Effect Conc	4.2 mg/l
4,4'-ISOPROPYLI DENEDIPHENOL-EPICHLOROH YDRIN POLYMER	25068-38-6	Water flea	Experimental	21 days	No obs Effect Conc	0.3 mg/l
BUTYLATED	71033-08-4		Data not			

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EPOXY RESIN			available or insufficient for classification			
DIMETHYL SILOXANE, REACTION PRODUCT WITH SILICA	67762-90-7		Data not available or insufficient for classification			
3-(TRIMETHOXY Silyl)propyl Glycidyl Ether	2530-83-8	Common Carp	Experimental	96 hours	Lethal Concentration 50%	55 mg/l
3-(TRIMETHOXY Silyl)propyl Glycidyl Ether	2530-83-8	Crustacea other	Experimental	48 hours	Lethal Concentration 50%	324 mg/l
3-(TRIMETHOXY Silyl)propyl Glycidyl Ether	2530-83-8	Green algae	Experimental	96 hours	Effect Concentration 50%	350 mg/l
3-(TRIMETHOXY Silyl)propyl Glycidyl Ether	2530-83-8	Green Algae	Experimental	96 hours	No obs Effect Conc	130 mg/l
3-(TRIMETHOXY Silyl)propyl Glycidyl Ether	2530-83-8	Water flea	Experimental	21 days	No obs Effect Conc	>=100 mg/l

12.2. Persistence and degradability

Material	CAS No.	Test Type	Duration	Study Type	Test Result	Protocol
4,4'-ISOPROPYLI DENEPIHENOL-EPICHLOROHYDRIN POLYMER	25068-38-6	Estimated Hydrolysis		Hydrolytic half-life	<2 days (t 1/2)	Other methods
4,4'-ISOPROPYLI DENEPIHENOL-EPICHLOROHYDRIN	25068-38-6	Experimental Biodegradation	28 days	Biological Oxygen Demand	0 % BOD/ThBOD	OECD 301C - MITI (I)

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POLYMER						
BUTYLATED EPOXY RESIN	71033-08-4	Estimated Biodegradation	28 days	Biological Oxygen Demand	20 % BOD/ThBOD	OECD 301F - Manometric Respiro
DIMETHYL SILOXANE, REACTION PRODUCT WITH SILICA	67762-90-7	Data not availbl- insufficient			N/A	
3-(TRIMETHOXY Silyl)propyl Glycidyl Ether	2530-83-8	Experimental Hydrolysis		Hydrolytic half-life	6.5 hours (t 1/2)	Other methods
3-(TRIMETHOXY Silyl)propyl Glycidyl Ether	2530-83-8	Experimental Biodegradation	28 days	Dissolv. Organic Carbon Deplet	37 % weight	Other methods

12.3. Bioaccumulative potential

Material	CAS No.	Test Type	Duration	Study Type	Test Result	Protocol
4,4'-ISOPROPYLDIPHENYLDICHLOROHYDRIN POLYMER	25068-38-6	Experimental BCF-Carp	28 days	Bioaccumulation Factor	<=42	OECD 305E-Bioaccum F1-thru fis
BUTYLATED EPOXY RESIN	71033-08-4	Estimated BCF - Other		Bioaccumulation Factor	6.5	Est: Bioconcentration factor
DIMETHYL SILOXANE, REACTION PRODUCT WITH SILICA	67762-90-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
3-(TRIMETHOXY Silyl)propyl Glycidyl Ether	2530-83-8	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

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