



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 Adhesive DP110 Gray, Part A or Epoxy Adhesive 110 Gray, Part A

Product Identification Numbers

62-3633-8531-1

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

Skin Corrosion/Irritation: Category 2.

Serious Eye Damage/Irritation: Category 2.

Skin Sensitizer: Category 1.

Chronic Aquatic Toxicity: Category 2.

2.2. Label elements

Signal word

Warning

Symbols

Exclamation mark | Environment |

Pictograms**Hazard Statements:**

H315	Causes skin irritation.
H319	Causes serious eye irritation.
H317	May cause an allergic skin reaction.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statements**Prevention:**

P273	Avoid release to the environment.
P280E	Wear protective gloves.

Response:

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

Disposal:

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

Persons previously sensitized to amines may develop a cross-sensitization reaction to certain other amines., The principle of dilution was used to bridge test results for eye damage/irritation. The test results are reflected in the assigned classification.

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	C.A.S. No.	% by Wt
Mercaptan Polymer	72244-98-5	40 - 80
Polyamide Resin	68410-23-1	5 - 30
Modified Epoxy Resin (NJTS Reg. No. 04499600-6838)	Trade Secret	20 - 30
Hydrogenated Terphenyl	61788-32-7	5 - 10
Hydrogenated Polyphenyls	68956-74-1	1 - 5
2,4,6-tris[(Dimethylamino)Methyl]Phenol	90-72-2	< 3
Triethylenetetramine	112-24-3	0.5 - 2
Terphenyl	26140-60-3	< 1
Carbon Black	1333-86-4	0.1 - 1

SECTION 4: First aid measures

4.1. Description of first aid measures**Inhalation:**

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

Skin Contact:

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

Eye Contact:

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

If Swallowed:

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

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

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

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

Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

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

5.2. Special hazards arising from the substance or mixture

None inherent in this product.

Hazardous Decomposition or By-Products

Substance

Aldehydes

Hydrocarbons

Carbon monoxide

Carbon dioxide

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

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

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
Carbon Black	1333-86-4	ACGIH	TWA(inhalable fraction):3 mg/m ³	A3: Confirmed animal carcin.
Carbon Black	1333-86-4	Malaysia OELs	TWA(8 hours):3.5 mg/m ³	
Terphenyl	26140-60-3	ACGIH	CEIL:5 mg/m ³	
Terphenyl	26140-60-3	Malaysia OELs	CEIL:5 mg/m ³ (0.5 ppm)	
Hydrogenated Terphenyl	61788-32-7	ACGIH	TWA:0.5 ppm	
Hydrogenated Terphenyl	61788-32-7	Malaysia OELs	TWA(8 hours):4.9 mg/m ³ (0.5 ppm)	

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

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
Color	Gray
Odor	Very Slight Odor
Odor threshold	No Data Available
pH	Not Applicable
Melting point/Freezing point	Not Applicable
Boiling point/Initial boiling point/Boiling range	≥ 260 °C
Flash Point	248.9 °C [Test Method: Closed Cup]
Evaporation rate	No Data Available
Flammability (solid, gas)	Not Applicable
Flammable Limits(LEL)	No Data Available
Flammable Limits(UEL)	No Data Available
Vapor Pressure	No Data Available
Vapor Density and/or Relative Vapor Density	No Data Available
Density	1.1 g/ml
Relative Density	1.1 [Ref Std: WATER=1]
Water solubility	Nil
Solubility- non-water	No Data Available
Partition coefficient: n-octanol/ water	No Data Available
Autoignition temperature	No Data Available
Decomposition temperature	No Data Available
Viscosity/Kinematic Viscosity	30,000 - 70,000 mPa-s [@ 23 °C]
Volatile Organic Compounds	No Data Available
Percent volatile	No Data Available
VOC Less H2O & Exempt Solvents	0 g/l [Test Method: calculated SCAQMD rule 443.1] [Details: when used as intended with Part B]
VOC Less H2O & Exempt Solvents	0 g/l [Test Method: calculated SCAQMD rule 443.1] [Details: as supplied]
VOC Less H2O & Exempt Solvents	0 % [Test Method: calculated SCAQMD rule 443.1] [Details: when used as intended with Part B]
Molecular weight	No Data Available

SECTION 10: Stability and reactivity

10.1. Reactivity

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

10.2. Chemical stability

Stable.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Avoid curing large quantities of material to prevent a premature reaction (exotherm) with production of intense heat and smoke.

10.5. Incompatible materials

Strong oxidizing agents

Strong acids

Strong bases

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:

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:

May be harmful if swallowed.

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

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 >5,000 mg/kg
Overall product	Ingestion		No data available; calculated ATE >2,000 - =5,000 mg/kg
Mercaptan Polymer	Dermal	Rabbit	LD50 > 10,200 mg/kg
Mercaptan Polymer	Ingestion	Rat	LD50 2,600 mg/kg
Polyamide Resin	Dermal	Rat	LD50 > 2,000 mg/kg
Polyamide Resin	Ingestion	Rat	LD50 > 2,000 mg/kg
Hydrogenated Terphenyl	Dermal	Rabbit	LD50 > 2,000 mg/kg
Hydrogenated Terphenyl	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 4.7 mg/l
Hydrogenated Terphenyl	Ingestion	Rat	LD50 > 10,000 mg/kg
2,4,6-tris[(Dimethylamino)Methyl]Phenol	Dermal	Rat	LD50 1,280 mg/kg
2,4,6-tris[(Dimethylamino)Methyl]Phenol	Ingestion	Rat	LD50 1,000 mg/kg
Triethylenetetramine	Dermal	Rabbit	LD50 550 mg/kg
Triethylenetetramine	Ingestion	Rat	LD50 2,500 mg/kg
Terphenyl	Dermal	Rabbit	LD50 > 5,000 mg/kg
Terphenyl	Inhalation-Dust/Mist (4 hours)	Rat	LD50 > 3.8 mg/l
Terphenyl	Ingestion	Rat	LD50 2,304 mg/kg
Carbon Black	Dermal	Rabbit	LD50 > 3,000 mg/kg
Carbon Black	Ingestion	Rat	LD50 > 8,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Mercaptan Polymer	Rabbit	No significant irritation
Polyamide Resin	In vitro data	Irritant
Hydrogenated Terphenyl	Rabbit	No significant irritation
2,4,6-tris[(Dimethylamino)Methyl]Phenol	Rabbit	Corrosive
Triethylenetetramine	Rabbit	Corrosive
Terphenyl	Rabbit	No significant irritation
Carbon Black	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Overall product	In vitro data	Severe irritant
Mercaptan Polymer	Rabbit	Mild irritant
Polyamide Resin	Rabbit	Corrosive
Hydrogenated Terphenyl	Rabbit	No significant irritation
2,4,6-tris[(Dimethylamino)Methyl]Phenol	Rabbit	Corrosive
Triethylenetetramine	Rabbit	Corrosive
Terphenyl	Rabbit	No significant irritation
Carbon Black	Rabbit	No significant irritation

Sensitization:

Skin Sensitization

Name	Species	Value
Mercaptan Polymer	Mouse	Sensitizing
Polyamide Resin	Mouse	Sensitizing
Hydrogenated Terphenyl	Human	Not classified

3M™ Scotch-Weld™ Epoxy Adhesive DP110 Gray, Part A or Epoxy Adhesive 110 Gray, Part A

2,4,6-tris[(Dimethylamino)Methyl]Phenol	Guinea pig	Not classified
Triethylenetetramine	Guinea pig	Sensitizing

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
Mercaptan Polymer	In Vitro	Not mutagenic
Polyamide Resin	In Vitro	Not mutagenic
Hydrogenated Terphenyl	In Vitro	Not mutagenic
Hydrogenated Terphenyl	In vivo	Not mutagenic
2,4,6-tris[(Dimethylamino)Methyl]Phenol	In Vitro	Not mutagenic
Terphenyl	In Vitro	Not mutagenic
Terphenyl	In vivo	Not mutagenic
Carbon Black	In Vitro	Not mutagenic
Carbon Black	In vivo	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Carbon Black	Dermal	Mouse	Not carcinogenic
Carbon Black	Ingestion	Mouse	Not carcinogenic
Carbon Black	Inhalation	Rat	Carcinogenic

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

Name	Route	Value	Species	Test Result	Exposure Duration
Polyamide Resin	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	premating into lactation
Polyamide Resin	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	6 weeks
Polyamide Resin	Ingestion	Not classified for development	Rat	NOAEL 1,000 mg/kg/day	premating into lactation
Hydrogenated Terphenyl	Ingestion	Not classified for female reproduction	Rat	NOAEL 81 mg/kg/day	2 generation
Hydrogenated Terphenyl	Ingestion	Not classified for male reproduction	Rat	NOAEL 62 mg/kg/day	2 generation
Hydrogenated Terphenyl	Ingestion	Not classified for development	Rat	NOAEL 500 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
Polyamide Resin	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	
2,4,6-tris[(Dimethylamino)Methyl]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
Mercaptan Polymer	Ingestion	hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 75 mg/kg/day	90 days
Mercaptan Polymer	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 250 mg/kg/day	90 days
Mercaptan Polymer	Ingestion	endocrine system heart skin immune system nervous system eyes kidney and/or bladder respiratory system vascular system	Not classified	Rat	NOAEL 1,000 mg/kg/day	90 days
Polyamide Resin	Ingestion	heart liver immune system endocrine system gastrointestinal tract bone, teeth, nails, and/or hair hematopoietic system nervous system kidney and/or bladder respiratory system vascular system	Not classified	Rat	NOAEL 1,000 mg/kg/day	6 weeks
Hydrogenated Terphenyl	Dermal	skin	Not classified	Rabbit	NOAEL 500 mg/kg/day	3 weeks
Hydrogenated Terphenyl	Dermal	hematopoietic system	Not classified	Rabbit	NOAEL 2,000 mg/kg/day	3 weeks
Hydrogenated Terphenyl	Inhalation	liver hematopoietic system eyes	Not classified	Rat	NOAEL 0.5 mg/l	13 weeks
Hydrogenated Terphenyl	Ingestion	hematopoietic system kidney and/or bladder liver eyes respiratory system	Not classified	Rat	NOAEL 120 mg/kg/day	14 weeks
2,4,6-tris[(Dimethylamino)Methyl]Phenol	Dermal	skin liver nervous system auditory system hematopoietic system eyes	Not classified	Rat	NOAEL 125 mg/kg/day	28 days
Carbon Black	Inhalation	pneumoconiosis	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
Mercaptan Polymer	72244-98-5	Activated sludge	Experimental	3 hours	EC50	>1,000 mg/l
Mercaptan Polymer	72244-98-5	Green algae	Experimental	72 hours	EC50	>733 mg/l
Mercaptan Polymer	72244-98-5	Water flea	Experimental	48 hours	EC50	12 mg/l
Mercaptan Polymer	72244-98-5	Zebra Fish	Experimental	96 hours	LC50	87 mg/l
Mercaptan Polymer	72244-98-5	Green algae	Experimental	72 hours	NOEC	338 mg/l
Mercaptan Polymer	72244-98-5	Water flea	Experimental	21 days	NOEC	3.5 mg/l
Polyamide Resin	68410-23-1	Water flea	Estimated	48 hours	EC50	5.18 mg/l
Polyamide Resin	68410-23-1	Zebra Fish	Estimated	96 hours	LC50	7.07 mg/l
Polyamide Resin	68410-23-1	Activated sludge	Experimental	3 hours	EC50	314 mg/l
Polyamide Resin	68410-23-1	Bacteria	Experimental	N/A	NOEC	>100 mg/l
Polyamide Resin	68410-23-1	Green algae	Experimental	72 hours	EC50	4.11 mg/l
Polyamide Resin	68410-23-1	Green algae	Experimental	72 hours	NOEC	1.25 mg/l
Hydrogenated Terphenyl	61788-32-7	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Hydrogenated Terphenyl	61788-32-7	Activated sludge	Experimental	3 hours	NOEC	103 mg/l
Hydrogenated Polyphenyls	68956-74-1	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
2,4,6-tris[(Dimethylamino)Methyl]Phenol	90-72-2	N/A	Experimental	96 hours	LC50	718 mg/l
2,4,6-tris[(Dimethylamino)Methyl]Phenol	90-72-2	Common Carp	Experimental	96 hours	LC50	>100 mg/l
2,4,6-tris[(Dimethylamino)Methyl]Phenol	90-72-2	Green algae	Experimental	72 hours	EC50	46.7 mg/l
2,4,6-tris[(Dimethylamino)Methyl]Phenol	90-72-2	Water flea	Experimental	48 hours	EC50	>100 mg/l
2,4,6-tris[(Dimethylamino)Methyl]Phenol	90-72-2	Green algae	Experimental	72 hours	NOEC	6.44 mg/l
Triethylenetetramine	112-24-3	Green algae	Experimental	72 hours	EC50	27.4 mg/l
Triethylenetetramine	112-24-3	Guppy	Experimental	96 hours	LC50	570 mg/l
Triethylenetetramine	112-24-3	Water flea	Experimental	48 hours	EC50	37.4 mg/l
Triethylenetetramine	112-24-3	Green algae	Experimental	72 hours	NOEC	0.468 mg/l
Triethylenetetramine	112-24-3	Water flea	Experimental	21 days	NOEC	2.86 mg/l
Carbon Black	1333-86-4	Activated sludge	Experimental	3 hours	EC50	>=100 mg/l
Carbon Black	1333-86-4	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Terphenyl	26140-60-3	Water flea	Estimated	48 hours	EC50	0.022 mg/l
Terphenyl	26140-60-3	Green algae	Experimental	72 hours	EC50	0.102 mg/l
Terphenyl	26140-60-3	Rainbow Trout	Experimental	96 hours	LC50	27 mg/l
Terphenyl	26140-60-3	Fathead Minnow	Experimental	34 days	NOEC	0.064 mg/l
Terphenyl	26140-60-3	Green algae	Experimental	72 hours	NOEC	0.003 mg/l
Terphenyl	26140-60-3	Water flea	Experimental	21 days	NOEC	0.005 mg/l

12.2. Persistence and degradability

Material	CAS No.	Test Type	Duration	Study Type	Test Result	Protocol
Mercaptan Polymer	72244-98-5	Experimental Biodegradation	28 days	Carbon dioxide evolution	5 %CO ₂ evolution/THCO ₂ evolution	OECD 301B - Mod. Sturm or CO ₂
Modified Epoxy Resin (NJTS Reg. No. 04499600-6838)	Trade Secret	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Polyamide Resin	68410-23-1	Experimental Biodegradation	28 days	Biological Oxygen Demand	15 %BOD/ThOD	OECD 301D - Closed Bottle Test
Hydrogenated Terphenyl	61788-32-7	Experimental Biodegradation	35 days	Carbon dioxide evolution	1 %CO ₂ evolution/THCO ₂ evolution	OECD 301B - Mod. Sturm or CO ₂
Hydrogenated Terphenyl	61788-32-7	Experimental Photolysis		Photolytic half-life(in water)	86 days (t 1/2)	
Hydrogenated Terphenyl	61788-32-7	Experimental Soil Metabolism Aerobic		Half-life (t 1/2)	202 days (t 1/2)	
Hydrogenated Polyphenyls	68956-74-1	Data not availbl-insufficient	N/A	N/A	N/A	N/A
2,4,6-tris[(Dimethylamino)Methyl]Phenol	90-72-2	Experimental Biodegradation	28 days	Biological Oxygen Demand	4 %BOD/ThOD	OECD 301D - Closed Bottle Test
Triethylenetetramine	112-24-3	Experimental Biodegradation	20 days	Biological Oxygen Demand	0 %BOD/ThOD	OECD 301D - Closed Bottle Test
Carbon Black	1333-86-4	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Terphenyl	26140-60-3	Experimental Biodegradation	14 days	Biological Oxygen Demand	0.5 %BOD/ThOD	OECD 301C - MITI (I)

12.3. Bioaccumulative potential

Material	CAS No.	Test Type	Duration	Study Type	Test Result	Protocol
Mercaptan Polymer	72244-98-5	Estimated Bioconcentration		Log of Octanol/H ₂ O part. coeff	>1.2	
Modified Epoxy Resin (NJTS Reg. No. 04499600-6838)	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Polyamide Resin	68410-23-1	Estimated Bioconcentration		Bioaccumulation Factor	6.8	
Hydrogenated Terphenyl	61788-32-7	Analogous Compound BCF - Fish	42 days	Bioaccumulation Factor	5200	similar to OECD 305
Hydrogenated Terphenyl	61788-32-7	Experimental Bioconcentration		Log of Octanol/H ₂ O part. coeff	>5.3	OECD 117 log Kow HPLC method
Hydrogenated Polyphenyls	68956-74-1	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
2,4,6-tris[(Dimethylamino)Methyl]Phenol	90-72-2	Experimental Bioconcentration		Log of Octanol/H ₂ O part. coeff	-0.66	830.7550 Part.Coeff Shake Flask
Triethylenetetramine	112-24-3	Experimental BCF - Fish	42 days	Bioaccumulation Factor	<5.0	OECD305-Bioconcentration
Carbon Black	1333-86-4	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Terphenyl	26140-60-3	Estimated BCF -	60 days	Bioaccumulation	2300	OECD305-Bioconcentration

		Fish		Factor		
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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:UN3082

Proper Shipping Name:ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

Technical Name:None assigned.

Hazard Class/Division:9

Subsidiary Risk:None assigned.

Packing Group:III

Limited Quantity:None assigned.

Marine Pollutant: Yes

Marine Pollutant Technical Name: None assigned.

Other Dangerous Goods Descriptions:

None assigned.

Air Transport (IATA)

UN Number:UN3082

Proper Shipping Name:ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

Technical Name:None assigned.

Hazard Class/Division:9

Subsidiary Risk:None assigned.

Packing Group:III

Limited Quantity:None assigned.

Marine Pollutant: Yes

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 material are in compliance with the provisions of Philippines RA 6969 requirements. Certain restrictions may apply. Contact the selling division for additional information. The components of this product are in compliance with the chemical notification requirements of TSCA. 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