Safety Data Sheet

Document Group:	10-5609-2	**Version Number:**	3.00
Issue Date:	02/12/2019	**Supercedes Date:**	25/12/2014

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™ Scotchcast™ Multi-Mold Resin Splice Kit 85-14 (Scotchcast™ 2104)

Product Identification Numbers
78-8025-2928-5 80-6100-7712-7

1.2. Recommended use and restrictions on use

Recommended use
Electrical, Electrical splicing and insulation

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:

25-1043-6, 25-0742-4

TRANSPORT INFORMATION

Marine Transport (IMDG): UN Number: UN3082
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Hazard Class/Division: 9
Packing group: III
Limited Quantity: Yes

Marine Pollutant: Yes
Air Transport (IATA): UN Number: UN3082
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Hazard Class/Division: 9
Packing group: III
Marine Pollutant: Yes
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 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

Document Group:	25-0742-4	**Version Number:**	4.00
Issue Date:	18/11/2019	**Supercedes Date:**	26/02/2019

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™ Scotchcast™ Electrical Insulating Resin 2104, Part A

Product Identification Numbers
80-6116-1275-7

1.2. Recommended use and restrictions on use

Recommended use
Electrical, Part A of two part electrical resin

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 (inhalation): Category 4.
Serious Eye Damage/Irritation: Category 2.
Skin Corrosion/Irritation: Category 2.
Respiratory Sensitizer: Category 1.
Skin Sensitizer: Category 1.
Specific Target Organ Toxicity (single exposure): Category 3.
Specific Target Organ Toxicity (repeated exposure): Category 1.
Chronic Aquatic Toxicity: Category 1.

2.2. Label elements
Signal word
Danger

Symbols
Exclamation mark | Health Hazard | Environment |

Pictograms

Hazard Statements

H319	Causes serious eye irritation.
H315	Causes skin irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317	May cause an allergic skin reaction.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H372	Causes damage to organs through prolonged or repeated exposure: respiratory system |
H373	May cause damage to organs through prolonged or repeated exposure: respiratory system |
H410	Very toxic 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.
P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P271	Use only outdoors or in a well-ventilated area.
P285	In case of inadequate ventilation wear respiratory protection.
P280E	Wear protective gloves.
P273	Avoid release to the environment.

Response:

P304 + P341	IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
P342 + P311	If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.

Storage:

P405	Store locked up.

Disposal:

P501	Dispose of contents/container in accordance with applicable

local/regional/national/international regulations.

2.3. Other hazards
None known

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	C.A.S. No.	% by Wt
PHTHALIC ACID, DI-C11-14-BRANCHED ALKYL ESTERS, C13-RICH	68515-47-9	35 - 50
POLYMETHYLENE POLYPHENYLENE ISOCYANATE	9016-87-9	15 - 35
1,3-BUTADIENE, HOMOPOLYMER, HYDROXY-TERMINATED	69102-90-5	15 - 25
P,P'-METHYLENEBIS(PHENYL ISOCYANATE)	101-68-8	5 - 20
1,1'-METHYLENEBIS(ISOCYANATOBENZENE)	26447-40-5	0 - 10
PHENYL ISOCYANATE	103-71-9	0 - 0.5
C.I. SOLVENT YELLOW 3	97-56-3	< 0.02

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	Condition
Isocyanates	During Combustion
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Hydrogen Cyanide	During Combustion
Oxides of Nitrogen	During Combustion

5.3. Special protective actions for fire-fighters
No special protective actions for fire-fighters are anticipated.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust 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
Contain spill. Pour isocyanate decontaminant solution (90% water, 8% concentrated ammonia, 2% detergent) on spill and allow to react for 10 minutes. Or pour water on spill and allow to react for more than 30 minutes. Cover with absorbent material. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible. Place in a container approved for transportation by appropriate authorities, but do not seal the container for 48 hours to avoid pressure build-up. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and SDS. 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
Store in a well-ventilated place. Keep container tightly closed to prevent contamination with water or air. If contamination is suspected, do not reseal container. Store away from amines.

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
P,P'-METHYLENEBIS(PHENYL ISOCYANATE)	101-68-8	ACGIH	TWA:0.005 ppm	
P,P'-METHYLENEBIS(PHENYL ISOCYANATE)	101-68-8	Malaysia OELs	TWA(8 hours):0.051 mg/m3(0.005 ppm)	
PHENYL ISOCYANATE	103-71-9	ACGIH	TWA:0.005 ppm;STEL:0.015 ppm	SKIN; Resp+Dermal sensitizer

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 supplied-air respirator

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

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid

Specific Physical Form:	Resin
Color	Dark Green
Odor	Isocyanate
Odor threshold	*No Data Available*
pH	*No Data Available*
Melting point/Freezing point	*No Data Available*
Boiling point/Initial boiling point/Boiling range	>= 110 ºC
Flash Point	110 ºC [*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	*No Data Available*
Density	1.04 g/ml
Relative Density	1.04 [*Ref Std:*WATER=1]
Water solubility	Slight (less than 10%)
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	1,400 mPa-s - 2,000 mPa-s
Average particle size	*No Data Available*
Bulk density	*No Data Available*
Molecular weight	*No Data Available*
Volatile Organic Compounds	*No Data Available*
Percent volatile	Negligible
Softening point	*No Data Available*
VOC Less H2O & Exempt Solvents	*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
Not determined

10.5. Incompatible materials
Amines
Alcohols
Water

Not Applicable

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:
Harmful if inhaled.
Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Allergic Respiratory Reaction: Signs/symptoms may include difficulty breathing, wheezing, cough, and tightness of chest.

May cause additional health effects (see below).

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.

Additional Health Effects:

Prolonged or repeated exposure may cause target organ effects:
Respiratory Effects: Signs/symptoms may include cough, shortness of breath, chest tightness, wheezing, increased heart rate, bluish colored skin (cyanosis), sputum production, changes in lung function tests, and/or respiratory failure.

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	Inhalation-Vapor(4 hr)		No data available; calculated ATE10 - 20 mg/l
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
POLYMETHYLENE POLYPHENYLENE ISOCYANATE	Dermal	Rabbit	LD50 > 5,000 mg/kg
POLYMETHYLENE POLYPHENYLENE ISOCYANATE	Inhalation-	Rat	LC50 0.368 mg/l

	Dust/Mist (4 hours)		
POLYMETHYLENE POLYPHENYLENE ISOCYANATE	Ingestion	Rat	LD50 31,600 mg/kg
1,3-BUTADIENE, HOMOPOLYMER, HYDROXY-TERMINATED	Dermal		LD50 estimated to be > 5,000 mg/kg
1,3-BUTADIENE, HOMOPOLYMER, HYDROXY-TERMINATED	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
P,P'-METHYLENEBIS(PHENYL ISOCYANATE)	Dermal	Rabbit	LD50 > 5,000 mg/kg
P,P'-METHYLENEBIS(PHENYL ISOCYANATE)	Inhalation-Dust/Mist (4 hours)	Rat	LC50 0.368 mg/l
P,P'-METHYLENEBIS(PHENYL ISOCYANATE)	Ingestion	Rat	LD50 31,600 mg/kg
1,1'-METHYLENEBIS(ISOCYANATOBENZENE)	Dermal	Rabbit	LD50 > 5,000 mg/kg
1,1'-METHYLENEBIS(ISOCYANATOBENZENE)	Inhalation-Dust/Mist (4 hours)	Rat	LC50 0.368 mg/l
1,1'-METHYLENEBIS(ISOCYANATOBENZENE)	Ingestion	Rat	LD50 31,600 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
POLYMETHYLENE POLYPHENYLENE ISOCYANATE	official classification	Irritant
P,P'-METHYLENEBIS(PHENYL ISOCYANATE)	official classification	Irritant
1,1'-METHYLENEBIS(ISOCYANATOBENZENE)	official classification	Irritant

Serious Eye Damage/Irritation

Name	Species	Value
POLYMETHYLENE POLYPHENYLENE ISOCYANATE	official classification	Severe irritant
P,P'-METHYLENEBIS(PHENYL ISOCYANATE)	official classification	Severe irritant
1,1'-METHYLENEBIS(ISOCYANATOBENZENE)	official classification	Severe irritant

Skin Sensitization

Name	Species	Value
POLYMETHYLENE POLYPHENYLENE ISOCYANATE	official classification	Sensitizing
P,P'-METHYLENEBIS(PHENYL ISOCYANATE)	official classification	Sensitizing
1,1'-METHYLENEBIS(ISOCYANATOBENZENE)	official classification	Sensitizing

Respiratory Sensitization

Name	Species	Value
POLYMETHYLENE POLYPHENYLENE ISOCYANATE	Human	Sensitizing
P,P'-METHYLENEBIS(PHENYL ISOCYANATE)	Human	Sensitizing
1,1'-METHYLENEBIS(ISOCYANATOBENZENE)	Human	Sensitizing

Germ Cell Mutagenicity

Name	Route	Value
POLYMETHYLENE POLYPHENYLENE ISOCYANATE	In Vitro	Some positive data exist, but the data are not sufficient for classification
P,P'-METHYLENEBIS(PHENYL ISOCYANATE)	In Vitro	Some positive data exist, but the data are not sufficient for classification
1,1'-METHYLENEBIS(ISOCYANATOBENZENE)	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
POLYMETHYLENE POLYPHENYLENE ISOCYANATE	Inhalation	Rat	Some positive data exist, but the data are not sufficient for classification
P,P'-METHYLENEBIS(PHENYL ISOCYANATE)	Inhalation	Rat	Some positive data exist, but the data are not sufficient for classification
1,1'-METHYLENEBIS(ISOCYANATOBENZENE)	Inhalation	Rat	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
POLYMETHYLENE POLYPHENYLENE ISOCYANATE	Inhalation	Not classified for development	Rat	NOAEL 0.004 mg/l	during organogenesis
P,P'-METHYLENEBIS(PHENYL ISOCYANATE)	Inhalation	Not classified for development	Rat	NOAEL 0.004 mg/l	during organogenesis
1,1'-METHYLENEBIS(ISOCYANATOBENZENE)	Inhalation	Not classified for development	Rat	NOAEL 0.004 mg/l	during organogenesis

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
POLYMETHYLENE POLYPHENYLENE ISOCYANATE	Inhalation	respiratory irritation	May cause respiratory irritation	official classification	NOAEL Not available	
P,P'-METHYLENEBIS(PHENYL ISOCYANATE)	Inhalation	respiratory irritation	May cause respiratory irritation	official classification	NOAEL Not available	
1,1'-METHYLENEBIS(ISOCYANATOBENZENE)	Inhalation	respiratory irritation	May cause respiratory irritation	official classification	NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
POLYMETHYLENE POLYPHENYLENE ISOCYANATE	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0.004 mg/l	13 weeks
P,P'-METHYLENEBIS(PHENYL ISOCYANATE)	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0.004 mg/l	13 weeks
1,1'-METHYLENEBIS(ISOCYANATOBENZENE)	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0.004 mg/l	13 weeks

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 1: Very toxic to aquatic life with long lasting effects.

No product test data available

Material	Cas #	Organism	Type	Exposure	Test Endpoint	Test Result
PHTHALIC ACID, DI-C11-14-BRANCHED ALKYL ESTERS, C13-RICH	68515-47-9	Rainbow Trout	Experimental	96 hours	Lethal Concentration 50%	>100 mg/l
PHTHALIC ACID, DI-C11-14-BRANCHED ALKYL ESTERS, C13-RICH	68515-47-9	Water flea	Experimental	48 hours	Effect Concentration 50%	>100 mg/l
PHTHALIC ACID, DI-C11-14-BRANCHED ALKYL ESTERS, C13-RICH	68515-47-9	Water flea	Experimental	21 days	No obs Effect Conc	>100 mg/l
POLYMETHYLENE POLYPHENYLENE ISOCYANATE	9016-87-9	Water flea	Estimated	24 hours	Effect Concentration 50%	>100 mg/l
1,3-BUTADIENE, HOMOPOLYMER, HYDROXY-	69102-90-5		Data not available or insufficient for classification			

TERMINATED						
P,P'-METHYLENE BIS(PHENYL ISOCYANATE)	101-68-8	Green algae	Estimated	72 hours	Effect Concentration 50%	>1,640 mg/l
P,P'-METHYLENE BIS(PHENYL ISOCYANATE)	101-68-8	Water flea	Estimated	24 hours	Effect Concentration 50%	>1,000 mg/l
P,P'-METHYLENE BIS(PHENYL ISOCYANATE)	101-68-8	Zebra Fish	Estimated	96 hours	Lethal Concentration 50%	>1,000 mg/l
P,P'-METHYLENE BIS(PHENYL ISOCYANATE)	101-68-8	Green algae	Estimated	72 hours	No obs Effect Conc	1,640 mg/l
P,P'-METHYLENE BIS(PHENYL ISOCYANATE)	101-68-8	Water flea	Estimated	21 days	No obs Effect Conc	10 mg/l
1,1'-METHYLENE BIS(ISOCYANATOBENZENE)	26447-40-5	Water flea	Estimated		Effect Concentration 50%	>100 mg/l
PHENYL ISOCYANATE	103-71-9	Goldfish	Estimated	96 hours	Lethal Concentration 50%	7.6 mg/l
PHENYL ISOCYANATE	103-71-9	Green Algae	Estimated	72 hours	Effect Concentration 50%	9.7 mg/l
PHENYL ISOCYANATE	103-71-9	Water flea	Estimated	48 hours	Lethal Concentration 50%	0.044 mg/l
PHENYL ISOCYANATE	103-71-9	Green Algae	Estimated	72 hours	Effect Concentration 10%	0.02 mg/l
PHENYL ISOCYANATE	103-71-9	Ricefish	Estimated	28 days	No obs Effect Conc	4.61 mg/l
PHENYL ISOCYANATE	103-71-9	Water flea	Estimated	21 days	No obs Effect Conc	0.004 mg/l
C.I. SOLVENT YELLOW 3	97-56-3	Green Algae	Estimated	72 hours	Effect Concentration 50%	2.9 mg/l
C.I. SOLVENT YELLOW 3	97-56-3	Ricefish	Estimated	96 hours	Lethal Concentration	0.35 mg/l

					50%	
C.I. SOLVENT YELLOW 3	97-56-3	Water flea	Estimated	48 hours	Effect Concentration 50%	0.46 mg/l
C.I. SOLVENT YELLOW 3	97-56-3	Green Algae	Estimated	72 hours	No obs Effect Conc	0.14 mg/l
C.I. SOLVENT YELLOW 3	97-56-3	Water flea	Estimated	21 days	No obs Effect Conc	0.0071 mg/l

12.2. Persistence and degradability

Material	CAS No.	Test Type	Duration	Study Type	Test Result	Protocol
PHTHALIC ACID, DI-C11-14-BRANCHED ALKYL ESTERS, C13-RICH	68515-47-9	Experimental Biodegradation	28 days	Biological Oxygen Demand	12.8 % weight	OECD 301F - Manometric Respiro
POLYMETHYLENE POLYPHENYLENE ISOCYANATE	9016-87-9	Experimental Hydrolysis		Hydrolytic half-life	<2 hours (t 1/2)	Other methods
POLYMETHYLENE POLYPHENYLENE ISOCYANATE	9016-87-9	Estimated Biodegradation	28 days	Biological Oxygen Demand	0 % weight	OECD 301C - MITI (I)
1,3-BUTADIENE, HOMOPOLYMER, HYDROXY-TERMINATED	69102-90-5	Data not availbl-insufficient			N/A	
P,P'-METHYLENE BIS(PHENYL ISOCYANATE)	101-68-8	Estimated Hydrolysis		Hydrolytic half-life	20 hours (t 1/2)	Other methods
1,1'-METHYLENE BIS(ISOCYANATOBENZENE)	26447-40-5	Estimated Hydrolysis		Hydrolytic half-life	<2 hours (t 1/2)	Other methods
1,1'-METHYLENE BIS(ISOCYANATOBENZENE)	26447-40-5	Estimated Biodegradation	28 days	Biological Oxygen Demand	0 % weight	OECD 301C - MITI (I)
PHENYL ISOCYANAT	103-71-9	Experimental Hydrolysis		Hydrolytic half-life	21 seconds (t 1/2)	Other methods

E						
PHENYL ISOCYANATE	103-71-9	Estimated Biodegradation	26 days	Carbon dioxide evolution	90 % weight	OECD 301B - Mod. Sturm or CO2
C.I. SOLVENT YELLOW 3	97-56-3	Estimated Biodegradation	28 days	Biological Oxygen Demand	0 % weight	OECD 301C - MITI (I)

12.3. Bioaccumulative potential

Material	CAS No.	Test Type	Duration	Study Type	Test Result	Protocol
PHTHALIC ACID, DI-C11-14-BRANCHED ALKYL ESTERS, C13-RICH	68515-47-9	Experimental Bioconcentration	9 days	Bioaccumulation Factor	<1	Other methods
POLYMETHYLENE POLYPHENYLENE ISOCYANATE	9016-87-9	Estimated BCF-Carp	28 days	Bioaccumulation Factor	200	Other methods
1,3-BUTADIENE, HOMOPOLYMER, HYDROXY-TERMINATED	69102-90-5	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
P,P'-METHYLENE BIS(PHENYL ISOCYANATE)	101-68-8	Experimental BCF-Carp	28 days	Bioaccumulation Factor	200	OECD 305E-Bioaccum Fl-thru fis
1,1'-METHYLENE BIS(ISOCYANATOBENZENE)	26447-40-5	Estimated BCF-Carp	28 days	Bioaccumulation Factor	200	Other methods
PHENYL ISOCYANATE	103-71-9	Estimated Bioconcentration		Log of Octanol/H2O part. coeff	0.9	Other methods
C.I. SOLVENT YELLOW 3	97-56-3	Estimated Bioconcentration		Bioaccumulation Factor	4.8	Est: Bioconcentration factor

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
All applicable chemical ingredients in this material are listed on the European Inventory of Existing Chemical Substances (EINECS), or are exempt polymers whose monomers are listed on EINECS. 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

Safety Data Sheet

Document Group:	25-1043-6	**Version Number:**	3.00
Issue Date:	26/02/2019	**Supercedes Date:**	02/12/2014

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™ Scotchcast™ Electrical Insulating Resin 2104, Part B

Product Identification Numbers
80-6116-1276-5

1.2. Recommended use and restrictions on use

Recommended use
Electrical, Part B of two part electrical resin

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 1.

2.2. Label elements
Signal word
Danger

Symbols
Corrosion |

Pictograms

Hazard Statements

H318	Causes serious eye damage.

Precautionary statements

General:

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

Prevention:

P280A	Wear eye/face protection.

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.
P310	Immediately call a POISON CENTER or doctor/physician.

2.3. Other hazards

None known

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	C.A.S. No.	% by Wt
POLYPROPYLENE GLYCOL GLYCEROL TRIETHER	25791-96-2	55 - 75
N,N-DI(2-HYDROXYPROPYL)ANILINE	3077-13-2	5 - 20
PHTHALIC ACID, DI-C11-14-BRANCHED ALKYL ESTERS, C13-RICH	68515-47-9	5 - 20
DIPROPYLENE GLYCOL	25265-71-8	1 - 10

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:

Wash with soap and water. If signs/symptoms develop, get medical attention.

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. 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	Condition
Aldehydes	During Combustion
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Oxides of Nitrogen	During Combustion

5.3. Special protective actions for fire-fighters
No special protective actions for fire-fighters are anticipated.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice.

6.2. Environmental precautions
Avoid release to the environment.

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

7.2. Conditions for safe storage including any incompatibilities
No special storage requirements.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits
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
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: 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
Appearance/Odor	Light amber liquid with glycol odor
Odor threshold	*No Data Available*
pH	*No Data Available*
Melting point/Freezing point	*No Data Available*
Boiling point/Initial boiling point/Boiling range	>= 110 ºC
Flash Point	>= 110 ºC [*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 Density	*No Data Available*
Density	1 g/ml
Relative Density	1 [*Ref Std:*WATER=1]

Water solubility	Slight (less than 10%)
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	450 mPa-s - 750 mPa-s
Average particle size	*No Data Available*
Bulk density	*No Data Available*
Molecular weight	*No Data Available*
Volatile Organic Compounds	*No Data Available*
Percent volatile	*No Data Available*
Softening point	*No Data Available*
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
None known.

10.5. Incompatible materials
None known.

No Data Available

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

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 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	Ingestion		No data available; calculated ATE2,000 - 5,000 mg/kg
POLYPROPYLENE GLYCOL GLYCEROL TRIETHER	Dermal	Rat	LD50 > 2,000 mg/kg
POLYPROPYLENE GLYCOL GLYCEROL TRIETHER	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 50 mg/l
POLYPROPYLENE GLYCOL GLYCEROL TRIETHER	Ingestion	Rat	LD50 4,600 mg/kg
N,N-DI(2-HYDROXYPROPYL)ANILINE	Dermal	Rabbit	LD50 > 2,000 mg/kg
N,N-DI(2-HYDROXYPROPYL)ANILINE	Ingestion	Rat	LD50 3,800 mg/kg
DIPROPYLENE GLYCOL	Dermal	Rabbit	LD50 > 5,010 mg/kg
DIPROPYLENE GLYCOL	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 2.34 mg/l
DIPROPYLENE GLYCOL	Ingestion	Rat	LD50 > 5,010 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
POLYPROPYLENE GLYCOL GLYCEROL TRIETHER	Rabbit	No significant irritation
N,N-DI(2-HYDROXYPROPYL)ANILINE	Professional judgement	Minimal irritation
DIPROPYLENE GLYCOL	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
POLYPROPYLENE GLYCOL GLYCEROL TRIETHER	Rabbit	Mild irritant
N,N-DI(2-HYDROXYPROPYL)ANILINE	Professional judgement	Corrosive
DIPROPYLENE GLYCOL	Rabbit	No significant irritation

Skin Sensitization

Name	Species	Value

DIPROPYLENE GLYCOL	Guinea pig	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
DIPROPYLENE GLYCOL	In Vitro	Not mutagenic
DIPROPYLENE GLYCOL	In vivo	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
DIPROPYLENE GLYCOL	Ingestion	Multiple animal species	Not carcinogenic

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
DIPROPYLENE GLYCOL	Ingestion	Not classified for development	Rat	NOAEL 5,000 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
DIPROPYLENE GLYCOL	Ingestion	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 470 mg/kg/day	105 weeks
DIPROPYLENE GLYCOL	Ingestion	heart	Not classified	Rat	NOAEL 470 mg/kg/day	105 weeks
DIPROPYLENE GLYCOL	Ingestion	endocrine system | liver	Not classified	Rat	NOAEL 3,040 mg/kg/day	105 weeks
DIPROPYLENE GLYCOL	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 115 mg/kg/day	105 weeks
DIPROPYLENE GLYCOL	Ingestion	skin | bone, teeth, nails, and/or hair | hematopoietic system | immune system | nervous system | vascular system	Not classified	Rat	NOAEL 3,040 mg/kg/day	105 weeks

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:
Not acutely toxic to aquatic life by GHS criteria.

Chronic aquatic hazard:
Not chronically toxic to aquatic life by GHS criteria.

No product test data available

Material	Cas #	Organism	Type	Exposure	Test Endpoint	Test Result
POLYPROPYLENE GLYCOL GLYCEROL TRIETHER	25791-96-2	Golden Orfe	Experimental	96 hours	Lethal Concentration 50%	>1,000 mg/l
POLYPROPYLENE GLYCOL GLYCEROL TRIETHER	25791-96-2	Green Algae	Experimental	72 hours	Effect Concentration 50%	>100 mg/l
POLYPROPYLENE GLYCOL GLYCEROL TRIETHER	25791-96-2	Water flea	Experimental	48 hours	Effect Concentration 50%	>100 mg/l
POLYPROPYLENE GLYCOL GLYCEROL TRIETHER	25791-96-2	Green Algae	Experimental	72 hours	No obs Effect Conc	>=100 mg/l
N,N-DI(2-HYDROXYPROPYL)ANILINE	3077-13-2		Data not available or insufficient for classification			
PHTHALIC ACID, DI-C11-14-BRANCHED ALKYL ESTERS, C13-RICH	68515-47-9	Rainbow Trout	Experimental	96 hours	Lethal Concentration 50%	>100 mg/l
PHTHALIC ACID, DI-C11-14-BRANCHED ALKYL ESTERS, C13-RICH	68515-47-9	Water flea	Experimental	48 hours	Effect Concentration 50%	>100 mg/l

PHTHALIC ACID, DI-C11-14-BRANCHED ALKYL ESTERS, C13-RICH	68515-47-9	Water flea	Experimental	21 days	No obs Effect Conc	>100 mg/l
DIPROPYLENE GLYCOL	25265-71-8	Goldfish	Experimental	96 hours	Lethal Concentration 50%	>5,000 mg/l
DIPROPYLENE GLYCOL	25265-71-8	Green algae	Experimental	72 hours	Effect Concentration 50%	>100 mg/l
DIPROPYLENE GLYCOL	25265-71-8	Water flea	Experimental	48 hours	Effect Concentration 50%	>100 mg/l
DIPROPYLENE GLYCOL	25265-71-8	Green algae	Experimental	72 hours	No obs Effect Conc	100 mg/l

12.2. Persistence and degradability

Material	CAS No.	Test Type	Duration	Study Type	Test Result	Protocol
POLYPROPYLENE GLYCOL GLYCEROL TRIETHER	25791-96-2	Experimental Biodegradation	28 days	Carbon dioxide evolution	38 % weight	OECD 301B - Mod. Sturm or CO2
N,N-DI(2-HYDROXYPROPYL)ANILINE	3077-13-2	Estimated Biodegradation	28 days	Biological Oxygen Demand	6 % weight	OECD 301C - MITI (I)
PHTHALIC ACID, DI-C11-14-BRANCHED ALKYL ESTERS, C13-RICH	68515-47-9	Experimental Biodegradation	28 days	Biological Oxygen Demand	12.8 % weight	OECD 301F - Manometric Respiro
DIPROPYLENE GLYCOL	25265-71-8	Experimental Biodegradation	28 days	Biological Oxygen Demand	84.4 % BOD/ThBOD	OECD 301F - Manometric Respiro

12.3. Bioaccumulative potential

Material	CAS No.	Test Type	Duration	Study Type	Test Result	Protocol
POLYPROPYLENE GLYCOL GLYCEROL TRIETHER	25791-96-2	Experimental BCF-Carp	42 days	Bioaccumulation Factor	≤7	Other methods
N,N-DI(2-HYDROXYPROPYL)ANILINE	3077-13-2	Estimated Bioconcentration		Bioaccumulation Factor	2.8	Est: Bioconcentration factor
PHTHALIC	68515-47-9	Experimental	9 days	Bioaccumulatio	<1	Other methods

ACID, DI-C11-14-BRANCHED ALKYL ESTERS, C13-RICH		Bioconcentration		n Factor		
DIPROPYLENE GLYCOL	25265-71-8	Experimental BCF-Carp	42 days	Bioaccumulation Factor	4.6	OECD 305E-Bioaccum Fl-thru fis

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: 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
All applicable chemical ingredients in this material are listed on the European Inventory of Existing Chemical Substances (EINECS), or are exempt polymers whose monomers are listed on EINECS. 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.

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