Safety Data Sheet

Document group:	36-4098-4	**Version number:**	2.00
Issue Date:	13/12/2020	**Supersedes date:**	06/06/2017

This Safety Data Sheet has been prepared in accordance with the New Zealand, Hazardous Substances (Safety Data Sheets) Notice 2017.

IDENTIFICATION:

1.1. Product identifier
3M™ Scotchcast™ Inline Resin Power Cable Splice Kits (82-AN, 82-A1N, 82-A2N, 82-A3N), with 3M™ Scotchcast™ Resin 4N

Product Identification Numbers
80-6116-1671-7 80-6116-1672-5 80-6116-1673-3

1.2. Recommended use and restrictions on use

Recommended use
Electrical

1.3. Supplier's details

Address:	3M New Zealand Ltd, 94 Apollo Drive, Rosedale 0632, Auckland
Telephone:	(09) 477 4040
E Mail:	innovation@nz.mmm.com
Website:	3m.co.nz

1.4. Emergency telephone number
24 hr Medical Emergency, National Poisons Centre, 0800 764 766 (0800 POISON)

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

24-9848-3, 35-7972-9

One or more components of this KIT is classified as a hazardous substance in accordance with the relevant criteria of the HSNO Act 1996, the Hazardous Substances (Classification) Notice 2017 and the Hazardous Substances (Minimum Degrees of Hazard) Notice 2017.

TRANSPORT INFORMATION

The Dangerous Goods Classification for the complete Kit is provided below.

UN No.: UN3267

Proper shipping name: CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S., (2-Piperazin-1-ylethylamine)
Class/Division: 8
Packing Group: III
Marine Pollutant: Not applicable.

Hazchem Code: 2X
IERG: 37

Land Transport Rule: Dangerous Goods - Road/Rail Transport
Special Instructions: Limited quantity may apply

International Maritime Dangerous Goods Code (IMDG) - Marine Transport
Special Instructions: Limited quantity may apply

Revision information:
Complete document review.

The information in this Safety Data Sheet (SDS) is believed to be correct as of the date of issue. TO THE EXTENT PERMITTED BY LAW, 3M MAKES NO WARRANTY, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY, OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's method of use or application. Given the variety of factors that can affect the use and application of a 3M product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluates the 3M product to determine whether it is fit for a particular purpose and suitable for user's method of use or application. 3M provides information in electronic form as a service to customers. Due to the remote possibility of electronic transfer may have resulted in errors, omissions or alterations in this information; 3M makes no representations as to its completeness or accuracy. In addition, information obtained from a database may not be as current as the information in the SDS available directly from 3M.

3M New Zealand SDS are available at 3M New Zealand Website: http://solutions.3mnz.co.nz

Safety Data Sheet

Document group:	35-7972-9	**Version number:**	2.00
Issue Date:	08/11/2022	**Supersedes date:**	06/06/2017

This Safety Data Sheet has been prepared in accordance with the New Zealand, Hazardous Substances (Safety Data Sheets) Notice 2017.

SECTION 1: Identification

1.1. Product identifier
3M™ Scotchcast™ Electrical Insulating Resin 4N, Part B

1.2. Recommended use and restrictions on use

Recommended use
Electrical, Part B of Resin 4N

For Industrial or Professional use only

1.3. Supplier's details

Address:	3M New Zealand Ltd, 94 Apollo Drive, Rosedale 0632, Auckland
Telephone:	(09) 477 4040
E Mail:	innovation@nz.mmm.com
Website:	3m.co.nz

1.4. Emergency telephone number
24 hr Medical Emergency, National Poisons Centre, 0800 764 766 (0800 POISON)

SECTION 2: Hazard identification

Classified as hazardous in accordance with the relevant criteria of the HSNO Act 1996 and the Hazardous Substances (Hazard Classification) Notice 2020.
Refer to Section 14 of this Safety Data Sheet for product Dangerous Goods Classification.

2.1. Classification of the substance or mixture
Acute Toxicity (oral): Category 4
Acute Toxicity (dermal): Category 4
Skin Corrosion/Irritation: Category 1B
Serious Eye Damage/Irritation: Category 1
Skin Sensitizer: Category 1A.
Carcinogenicity: Category 1
Reproductive Toxicity: Category 2
Specific Target Organ Toxicity (repeated exposure): Category 1
Chronic Aquatic Toxicity: Category 2

2.2. Label elements
SIGNAL WORD
Danger

Symbols:
Corrosion |Exclamation mark |Health Hazard |Environment |

Pictograms

HAZARD STATEMENTS:

H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H350	May cause cancer.
H361	Suspected of damaging fertility or the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure: respiratory system.
H411	Toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

Prevention

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P264	Wash thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280D	Wear protective gloves, protective clothing, and eye/face protection.

Response

P301 + P330 + P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
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.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P391	Collect spillage.

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. Persons previously sensitised to amines may develop a cross-sensitisation reaction to certain other amines.

SECTION 3: Composition/information on ingredients

Ingredient	CAS Nbr	% by Weight
Phenol, Styrenated	Trade Secret	25 - 70
2-Piperazin-1-ylethylamine	140-31-8	5 - 22
Heavy naphthenic distillate solvent, petroleum extracts.	64742-11-6	5 - 20
Alkyl Acids, Reaction Products With Triethylenetetramine	Trade Secret	5 - 17
Alykl Acids, Reaction Products With TETA And DGEBA	Trade Secret	4 - 10
Reaction product of cycloaliphatic amine with aromatic epoxy resin	Trade Secret	1 - 8
Thermal cracked residuum (petroleum)	64741-80-6	1 - 7
Distillates (petroleum), heavy thermal cracked	Trade Secret	1 - 7
2,4,6-Tris(dimethylaminomethyl)phenol	90-72-2	1 - 5
Triethylenetetramine	112-24-3	< 2
Bis[(dimethylamino)methyl]phenol	71074-89-0	<= 1
Carbon black	1333-86-4	< 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 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.
A product risk assessment is recommended to determine if eye wash facilities may be required when using this product in the workplace.

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

4.2. Most important symptoms and effects, both acute and delayed
The most important symptoms and effects based on the CLP classification include:

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

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media
Use a fire fighting agent suitable for the surrounding fire.

5.2. Special hazards arising from the substance or mixture

None inherent in this product.

Hazardous Decomposition or By-Products

Substance	Condition
Amine compounds.	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.

5.4. Hazchem code: 2X

SECTION 6: Accidental release measures

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

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

6.3. Methods and material for containment and cleaning up
Contain spill. For large spills, if necessary, get assistance from professional spill clean up team. For small spills, carefully neutralise spill by adding appropriate dilute acid such as vinegar. Work slowly to avoid boiling or spattering. Continue to add neutralising agent until reaction stops. Let cool before collecting. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorised person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and Safety Data Sheet. Seal the container. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

SECTION 7: Handling and storage

Refer to Section 15 - Controls for more information

7.1. Precautions for safe handling
Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Use personal protective equipment (eg. gloves, respirators…) as required.

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

7.3. Certified handler
Not required

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

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

Ingredient	CAS Nbr	Agency	Limit type	Additional comments
Triethylenetetramine	112-24-3	AIHA	TWA:6 mg/m3(1 ppm)	Skin
Carbon black	1333-86-4	ACGIH	TWA(inhalable fraction):3 mg/m3	A3: Confirmed animal carcinogen.
Carbon black	1333-86-4	New Zealand WES	TWA(8 hours): 3 mg/m3	Class-subclass 6.7, carc HCB

ACGIH : American Conference of Governmental Industrial Hygienists
AIHA : American Industrial Hygiene Association
CMRG : Chemical Manufacturer's Recommended Guidelines
New Zealand WES : New Zealand Workplace Exposure Standards.
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
ppm: parts per million
mg/m^3: milligrams per cubic metre
CEIL: Ceiling

8.2. Exposure controls

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

8.2.2. Personal protective equipment (PPE)

Eye/face protection

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.

Refer AS/NZS 1336 - Recommended practices for occupational eye protection and for performance specifications AS/NZS 1337, Parts 1 - 6 - Personal eye-protection.

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: Butyl rubber.

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

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.

Refer AS/NZS 1715 - Selection, use and maintenance of respiratory protective equipment and AS/NZS 1716 - Respiratory protective devices.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid.
Specific Physical Form:	Resin
Colour	Black
Odour	Amine
Odour threshold	*No data available.*
pH	10 - 12
Melting point/Freezing point	*No data available.*
Boiling point/Initial boiling point/Boiling range	319.4 ºC
Flash point	No flash point
Evaporation rate	*No data available.*
Flammability (solid, gas)	Not applicable.
Flammable Limits(LEL)	*No data available.*
Flammable Limits(UEL)	*No data available.*
Vapour pressure	533.3 Pa
Vapor Density and/or Relative Vapor Density	*No data available.*
Density	1.03 g/ml
Relative density	1.03 [*Ref Std:*WATER=1]
Water solubility	660 ppm [@ 77 ºF]
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	3,000 mPa-s - 4,500 mPa-s [@ 25 ºC]
Volatile organic compounds (VOC)	*No data available.*
Percent volatile	3 - 5 %
VOC less H2O & exempt solvents	*No data available.*
Average particle size	*No data available.*
Bulk density	*No data available.*
Molecular weight	*Not applicable.*

SECTION 10: Stability and reactivity

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

10.2 Chemical stability
Stable.

10.3 Possibility of hazardous reactions
Hazardous polymerisation will not occur.

10.4 Conditions to avoid
None known.

10.5 Incompatible materials
Strong acids.

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 labelling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1 Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation
May be harmful if inhaled. Respiratory tract irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. May cause additional health effects (see below).

Skin contact
Harmful in contact with skin. Corrosive (skin burns): Signs/symptoms may include localised 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
Harmful if swallowed.
Gastrointestinal corrosion: Signs/symptoms may include severe mouth, throat and abdominal pain, nausea, vomiting, and diarrhea; blood in the faeces and/or vomitus may also be seen. May cause additional health effects (see below).

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 coloured skin (cyanosis), sputum production, changes in lung function tests, and respiratory failure.

Reproductive/Developmental Toxicity:
Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

Carcinogenicity:
Contains a chemical or chemicals which can cause cancer.

Additional information:
Persons previously sensitised to amines may develop a cross-sensitisation reaction to certain other amines.

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

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE >1,000 - =2,000 mg/kg
Overall product	Inhalation-Dust/Mist(4 hr)		No data available; calculated ATE >5 - =12.5 mg/l
Overall product	Ingestion		No data available; calculated ATE >300 - =2,000 mg/kg
Phenol, Styrenated	Dermal	Rat	LD50 > 2,000 mg/kg
Phenol, Styrenated	Ingestion	Rat	LD50 > 2,000 mg/kg
2-Piperazin-1-ylethylamine	Dermal	Rabbit	LD50 865 mg/kg
2-Piperazin-1-ylethylamine	Ingestion	Rat	LD50 1,470 mg/kg
2,4,6-Tris(dimethylaminomethyl)phenol	Dermal	Rat	LD50 1,280 mg/kg
2,4,6-Tris(dimethylaminomethyl)phenol	Ingestion	Rat	LD50 1,000 mg/kg
Triethylenetetramine	Dermal	Rabbit	LD50 550 mg/kg
Triethylenetetramine	Ingestion	Rat	LD50 2,500 mg/kg
Bis[(dimethylamino)methyl]phenol	Ingestion		LD50 estimated to be 300 - 2,000 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
Phenol, Styrenated	Rabbit	No significant irritation
2-Piperazin-1-ylethylamine	Rabbit	Corrosive
2,4,6-Tris(dimethylaminomethyl)phenol	Rabbit	Corrosive
Triethylenetetramine	Rabbit	Corrosive
Bis[(dimethylamino)methyl]phenol	similar compounds	Corrosive
Carbon black	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Phenol, Styrenated	Rabbit	Mild irritant
2-Piperazin-1-ylethylamine	Rabbit	Corrosive
2,4,6-Tris(dimethylaminomethyl)phenol	Rabbit	Corrosive
Triethylenetetramine	Rabbit	Corrosive
Bis[(dimethylamino)methyl]phenol	similar compounds	Corrosive
Carbon black	Rabbit	No significant irritation

Sensitisation:

Skin Sensitisation

Name	Species	Value
Phenol, Styrenated	Mouse	Sensitising
2-Piperazin-1-ylethylamine	Guinea	Sensitising

	pig	
2,4,6-Tris(dimethylaminomethyl)phenol	Guinea pig	Not classified
Triethylenetetramine	Guinea pig	Sensitising

Respiratory Sensitisation

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

Germ Cell Mutagenicity

Name	Route	Value
2-Piperazin-1-ylethylamine	In vivo	Not mutagenic
2-Piperazin-1-ylethylamine	In Vitro	Some positive data exist, but the data are not sufficient for classification
2,4,6-Tris(dimethylaminomethyl)phenol	In Vitro	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
2-Piperazin-1-ylethylamine	Ingestion	Not classified for female reproduction	Rat	NOAEL 598 mg/kg/day	premating & during gestation
2-Piperazin-1-ylethylamine	Ingestion	Not classified for male reproduction	Rat	NOAEL 409 mg/kg/day	32 days
2-Piperazin-1-ylethylamine	Ingestion	Toxic to development	Rabbit	NOAEL 75 mg/kg/day	during gestation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
2-Piperazin-1-ylethylamine	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
2,4,6-Tris(dimethylaminomethyl) 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
2-Piperazin-1-ylethylamine	Dermal	skin	Not classified	Rat	NOAEL 100 mg/kg/day	29 days
2-Piperazin-1-ylethylamine	Dermal	hematopoietic system | nervous system | kidney and/or bladder	Not classified	Rat	NOAEL 1,000 mg/kg/day	29 days
2-Piperazin-1-ylethylamine	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Rat	NOAEL 0.2 mg/m3	13 weeks
2-Piperazin-1-	Inhalation	hematopoietic	Not classified	Rat	NOAEL 53.8	13 weeks

ylethylamine		system | eyes | kidney and/or bladder			mg/m3	
2-Piperazin-1-ylethylamine	Ingestion	heart | endocrine system | hematopoietic system | liver | nervous system | kidney and/or bladder	Not classified	Rat	NOAEL 598 mg/kg/day	28 days
2,4,6-Tris(dimethylaminomethyl)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 labelling, an ingredient is not expected to be available for exposure, or the data is considered not relevant to the material as a whole.

12.1. Toxicity
Ecotoxic to the aquatic environment.
Acute Aquatic Toxicity: Category 2
Chronic Aquatic Toxicity: Category 2

No product test data available.

Material	CAS Number	Organism	Type	Exposure	Test endpoint	Test result
Phenol, Styrenated	Trade Secret	Activated sludge	Experimental	3 hours	EC50	362 mg/l
Phenol, Styrenated	Trade Secret	Green algae	Experimental	72 hours	EC50	1.35 mg/l
Phenol, Styrenated	Trade Secret	Medaka	Experimental	96 hours	LC50	5.6 mg/l
Phenol, Styrenated	Trade Secret	Water flea	Experimental	48 hours	EC50	4.6 mg/l
Phenol, Styrenated	Trade Secret	Green algae	Experimental	72 hours	NOEC	0.42 mg/l
Phenol, Styrenated	Trade Secret	Water flea	Experimental	21 days	NOEC	0.2 mg/l
2-Piperazin-1-ylethylamine	140-31-8	Bacteria	Experimental	17 hours	EC10	100 mg/l
2-Piperazin-1-ylethylamine	140-31-8	Golden Orfe	Experimental	96 hours	LC50	368 mg/l
2-Piperazin-1-ylethylamine	140-31-8	Green algae	Experimental	72 hours	EC50	>1,000 mg/l

2-Piperazin-1-ylethylamine	140-31-8	Water flea	Experimental	48 hours	EC50	58 mg/l
2-Piperazin-1-ylethylamine	140-31-8	Green algae	Experimental	72 hours	NOEC	31 mg/l
Heavy naphthenic distillate solvent, petroleum extracts.	64742-11-6	Green algae	Analogous Compound	72 hours	EbC50	3.1 mg/l
Heavy naphthenic distillate solvent, petroleum extracts.	64742-11-6	Water flea	Analogous Compound	48 hours	EC50	1.4 mg/l
Alkyl Acids, Reaction Products With Triethylenetetramine	Trade Secret	Green algae	Experimental	72 hours	EC50	24 mg/l
Alkyl Acids, Reaction Products With Triethylenetetramine	Trade Secret	Water flea	Experimental	48 hours	EC50	31 mg/l
Alkyl Acids, Reaction Products With Triethylenetetramine	Trade Secret	Green algae	Experimental	72 hours	EC10	1.5 mg/l
Alykl Acids, Reaction Products With TETA And DGEBA	Trade Secret	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Reaction product of cycloaliphatic amine with aromatic epoxy resin	Trade Secret	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Distillates (petroleum), heavy thermal cracked	Trade Secret	Green algae	Estimated	72 hours	EL50	0.32 mg/l
Distillates (petroleum), heavy thermal cracked	Trade Secret	Rainbow trout	Estimated	96 hours	LL50	79 mg/l
Distillates (petroleum), heavy thermal cracked	Trade Secret	Water flea	Estimated	48 hours	EL50	0.22 mg/l
Distillates	Trade Secret	Green algae	Estimated	72 hours	NOEL	0.05 mg/l

(petroleum), heavy thermal cracked						
Thermal cracked residuum (petroleum)	64741-80-6	Green algae	Estimated	72 hours	EL50	0.32 mg/l
Thermal cracked residuum (petroleum)	64741-80-6	Rainbow trout	Estimated	96 hours	LL50	79 mg/l
Thermal cracked residuum (petroleum)	64741-80-6	Water flea	Estimated	48 hours	EL50	0.22 mg/l
Thermal cracked residuum (petroleum)	64741-80-6	Green algae	Estimated	72 hours	NOEL	0.05 mg/l
2,4,6-Tris(dimethylaminomethyl)phenol	90-72-2	N/A	Experimental	96 hours	LC50	718 mg/l
2,4,6-Tris(dimethylaminomethyl)phenol	90-72-2	Common Carp	Experimental	96 hours	LC50	>100 mg/l
2,4,6-Tris(dimethylaminomethyl)phenol	90-72-2	Green algae	Experimental	72 hours	EC50	46.7 mg/l
2,4,6-Tris(dimethylaminomethyl)phenol	90-72-2	Water flea	Experimental	48 hours	EC50	>100 mg/l
2,4,6-Tris(dimethylaminomethyl)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
Bis[(dimethylamino)methyl]phenol	71074-89-0	N/A	Data not available or insufficient for classification	N/A	N/A	NA
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

12.2. Persistence and degradability

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Phenol, Styrenated	Trade Secret	Experimental Biodegradation	28 days	BOD	7 %BOD/ThOD	OECD 301F - Manometric respirometry
2-Piperazin-1-ylethylamine	140-31-8	Experimental Biodegradation	28 days	BOD	0 %BOD/ThOD	OECD 301C - MITI test (I)
Heavy naphthenic distillate solvent, petroleum extracts.	64742-11-6	Analogous Compound Biodegradation	28 days	BOD	0 %BOD/ThOD	
Alkyl Acids, Reaction Products With Triethylenetetramine	Trade Secret	Experimental Biodegradation	28 days	CO2 evolution	6 %CO2 evolution/THCO2 evolution	OECD 301B - Modified sturm or CO2
Alykl Acids, Reaction Products With TETA And DGEBA	Trade Secret	Modeled Biodegradation	28 days	BOD	35 %BOD/ThOD	Catalogic™
Reaction product of cycloaliphatic amine with aromatic epoxy resin	Trade Secret	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Distillates (petroleum), heavy thermal cracked	Trade Secret	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Thermal cracked residuum (petroleum)	64741-80-6	Data not availbl-insufficient	N/A	N/A	N/A	N/A
2,4,6-Tris(dimethylaminomethyl)phenol	90-72-2	Experimental Biodegradation	28 days	BOD	4 %BOD/ThOD	OECD 301D - Closed bottle test
Triethylenetetramine	112-24-3	Experimental Biodegradation	20 days	BOD	0 %BOD/ThOD	OECD 301D - Closed bottle test
Bis[(dimethylamino)methyl]phenol	71074-89-0	Modeled Biodegradation	28 days	BOD	41 %CO2 evolution/THCO2 evolution	Catalogic™
Carbon black	1333-86-4	Data not availbl-insufficient	N/A	N/A	N/A	N/A

12.3 : Bioaccumulative potential

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Phenol, Styrenated	Trade Secret	Experimental BCF - Fish	10 days	Bioaccumulation factor	10395	
2-Piperazin-1-ylethylamine	140-31-8	Experimental Bioconcentration		Log Kow	0.3	
Heavy naphthenic distillate solvent, petroleum extracts.	64742-11-6	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Alkyl Acids, Reaction Products With Triethylenetetramine	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Alykl Acids, Reaction Products With TETA And DGEBA	Trade Secret	Modeled Bioconcentration		Bioaccumulation factor	7.4	Catalogic™
Reaction product of cycloaliphatic amine with aromatic epoxy resin	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Distillates (petroleum), heavy thermal cracked	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Thermal cracked residuum (petroleum)	64741-80-6	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
2,4,6-Tris(dimethylaminomethyl)phenol	90-72-2	Experimental Bioconcentration		Log Kow	-0.66	830.7550 Part.Coef Shake Flask
Triethylenetetramine	112-24-3	Experimental BCF - Fish	42 days	Bioaccumulation factor	<5.0	OECD305-Bioconcentration
Bis[(dimethylamino)methyl]phenol	71074-89-0	Modeled Bioconcentration		Log Kow	-2.34	ACD/Labs ChemSketch™
Carbon black	1333-86-4	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
In accordance with the Hazardous Substances (Disposal) Notice 2017 and the relevant criteria of the HSNO Act 1996.

Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

Packaging (that may or may not contain any residual substance) may be lawfully disposed of by householders or other consumers through public or commercial waste collection services.

SECTION 14: Transport Information

New Zealand Land Transport Rule: Dangerous Goods - Road/Rail Transport
UN No.: UN3267
Proper Shipping Name: CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. , (n-aminoethylpiperazine)
Class/Division: 8
Sub Risk: Not applicable.
Packing Group: III
Special Instructions: Limited quantity may apply
Hazchem Code: 2X
IERG: 37

International Air Transport Association (IATA) - Air Transport
UN No.: UN3267
Proper Shipping Name: CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. , (n-aminoethylpiperazine)
Class/Division: 8
Sub Risk: Not applicable.
Packing Group: III

International Maritime Dangerous Goods Code (IMDG) - Marine Transport
UN No.: UN3267
Proper Shipping Name: CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. , (n-aminoethylpiperazine)
Class/Division: 8
Sub Risk: Not applicable.
Packing Group: III
Marine Pollutant: Not applicable.
Special Instructions: Limited quantity may apply

SECTION 15: Regulatory information

HSNO Approval number	HSR002660
Group standard name	Surface Coatings and Colourants (Corrosive, Carcinogenic) Group Standard 2020
HSNO Hazard classification	Refer to Section 2: Hazard identification

NZ Inventory of Chemicals (NZIoC) Status

All applicable chemical ingredients in this material are in compliance with NZIoC listing requirements.

Controls in accordance with The Health and Safety at Work Act 2015, Health and Safety at Work (Hazardous Substances) Regulations 2017 and the HSNO Act 1996, Hazardous Substances (Hazardous Property Controls) Notice 2017

Certified handler	Not required
Location Compliance Certificate	Not required
Hazardous atmosphere zone	Not required
Fire extinguishers	Not required
Emergency response plan	100 L or 100 kg (for Hazardous to the aquatic environment Category 1 substances); or 1 000 L or 1 000 kg (for all other substances)
Secondary containment	100 L or 100 kg (for Hazardous to the aquatic environment Category 1 substances); or 1 000 L or 1 000 kg (for all other substances)
Tracking	Not required
Warning signage	100 L or 100 kg (for Hazardous to the aquatic environment Category 1 substances); or 250 L or 250 kg (for Skin corrosion Category 1B substances); or 1 000 L or 1 000 kg (for all other substances)

SECTION 16: Other information

Revision information:
Complete document review.

Document group:	35-7972-9	**Version number:**	2.00
Issue Date:	08/11/2022	**Supersedes date:**	06/06/2017

Key to abbreviations and acronyms
GHS refers to the Globally Harmonised System of Classification and Labelling of Chemicals, 7th revised edition of 2017
HSNO means Hazardous Substances and New Organisms Act 1996

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Safety Data Sheet

Document group:	24-9848-3	**Version number:**	5.00
Issue Date:	02/05/2023	**Supersedes date:**	01/11/2020

This Safety Data Sheet has been prepared in accordance with the New Zealand, Hazardous Substances (Safety Data Sheets) Notice 2017.

SECTION 1: Identification

1.1. Product identifier
3M™ Scotchcast™ Electrical Insulating Resin 4N, Part A and 3M™ Scotchcast™ Electrical Insulating Resin 4, Part A

1.2. Recommended use and restrictions on use

Recommended use
Electrical, Part A of Resin 4 & Resin 4N

For Industrial or Professional use only

1.3. Supplier's details

Address:	3M New Zealand Ltd, 94 Apollo Drive, Rosedale 0632, Auckland
Telephone:	(09) 477 4040
E Mail:	innovation@nz.mmm.com
Website:	3m.co.nz

1.4. Emergency telephone number
24 hr Medical Emergency, National Poisons Centre, 0800 764 766 (0800 POISON)

SECTION 2: Hazard identification

Classified as hazardous in accordance with the relevant criteria of the HSNO Act 1996 and the Hazardous Substances (Hazard Classification) Notice 2020.
Refer to Section 14 of this Safety Data Sheet for product Dangerous Goods Classification.

2.1. Classification of the substance or mixture
Serious Eye Damage/Irritation: Category 2
Skin Sensitizer: Category 1A.
Chronic Aquatic Toxicity: Category 2

2.2. Label elements
SIGNAL WORD
Warning

Symbols:
Exclamation mark |

Pictograms

HAZARD STATEMENTS:

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

PRECAUTIONARY STATEMENTS

Prevention

P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P264	Wash thoroughly after handling.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.

Response

P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
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.
P337 + P313	IF eye irritation persists: Get medical advice/attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P391	Collect spillage.

Disposal

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

SECTION 3: Composition/information on ingredients

Ingredient	CAS Nbr	% by Weight
2,2-Bis(p-hydroxyphenyl)propane diglycidyl ether polymer	25085-99-8	80 - 100
Oxirane, Mono[(C12-14-Alkyloxy)Methyl]Derivatives	68609-97-2	0 - 20

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation

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

Skin contact

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

Eye contact

Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, get medical attention.

A product risk assessment is recommended to determine if eye wash facilities may be required when using this product in the workplace.

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

4.2. Most important symptoms and effects, both acute and delayed
The most important symptoms and effects based on the CLP classification include:

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

SECTION 5: Fire-fighting measures

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

5.2. Special hazards arising from the substance or mixture
None inherent in this product.

Hazardous Decomposition or By-Products

Substance	Condition
Carbon monoxide.	During combustion.
Carbon dioxide.	During combustion.
Toxic vapour, gas, particulate.	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.

5.4. Hazchem code: Not applicable.

SECTION 6: Accidental release measures

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

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

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

SECTION 7: Handling and storage

Refer to Section 15 - Controls for more information

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

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

7.3. Certified handler
Not required

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits
No occupational exposure limit values exist for any of the components listed in Section 3 of this Safety Data Sheet.

8.2. Exposure controls

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

8.2.2. Personal protective equipment (PPE)

Eye/face protection

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

Refer AS/NZS 1336 - Recommended practices for occupational eye protection and for performance specifications AS/NZS 1337, Parts 1 - 6 - Personal eye-protection.

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.

Refer AS/NZS 1715 - Selection, use and maintenance of respiratory protective equipment and AS/NZS 1716 - Respiratory protective devices.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid.
Specific Physical Form:	Resin
Colour	Amber
Odour	Epoxy
Odour threshold	*No data available.*
pH	*No data available.*
Melting point/Freezing point	*No data available.*
Boiling point/Initial boiling point/Boiling range	>= 93.9 ºC
Flash point	>= 93.9 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.*
Vapour pressure	<= 186,158.4 Pa [@ 55 ºC]
Vapor Density and/or Relative Vapor Density	*No data available.*
Density	1.16 g/ml
Relative density	1.16 [*Ref Std:*WATER=1]
Water solubility	Negligible
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	3,000 mPa-s - 5,000 mPa-s
Volatile organic compounds (VOC)	*No data available.*
Percent volatile as Text	Negligible
VOC less H2O & exempt solvents	*No data available.*
Average particle size	*No data available.*
Bulk density	*No data available.*
Molecular weight	*No data available.*
Softening point	*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 polymerisation will not occur.

10.4 Conditions to avoid

None known.

10.5 Incompatible materials
None known.

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 labelling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1 Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

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

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

Eye contact
Moderate eye irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

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

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

Acute Toxicity

Name	Route	Species	Value
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
2,2-Bis(p-hydroxyphenyl)propane diglycidyl ether polymer	Dermal	Rat	LD50 > 1,600 mg/kg
2,2-Bis(p-hydroxyphenyl)propane diglycidyl ether polymer	Ingestion	Rat	LD50 > 1,000 mg/kg
Oxirane, Mono[(C12-14-Alkyloxy)Methyl]Derivatives	Dermal	Rabbit	LD50 > 4,000 mg/kg
Oxirane, Mono[(C12-14-Alkyloxy)Methyl]Derivatives	Ingestion	Rat	LD50 17,100 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value

2,2-Bis(p-hydroxyphenyl)propane diglycidyl ether polymer	Rabbit	Mild irritant
Oxirane, Mono[(C12-14-Alkyloxy)Methyl]Derivatives	Rabbit	Mild irritant

Serious Eye Damage/Irritation

Name	Species	Value
2,2-Bis(p-hydroxyphenyl)propane diglycidyl ether polymer	Rabbit	Moderate irritant
Oxirane, Mono[(C12-14-Alkyloxy)Methyl]Derivatives	Rabbit	Mild irritant

Sensitisation:

Skin Sensitisation

Name	Species	Value
2,2-Bis(p-hydroxyphenyl)propane diglycidyl ether polymer	Human and animal	Sensitising
Oxirane, Mono[(C12-14-Alkyloxy)Methyl]Derivatives	Guinea pig	Sensitising

Respiratory Sensitisation

Name	Species	Value
2,2-Bis(p-hydroxyphenyl)propane diglycidyl ether polymer	Human	Not classified

Germ Cell Mutagenicity

Name	Route	Value
2,2-Bis(p-hydroxyphenyl)propane diglycidyl ether polymer	In vivo	Not mutagenic
2,2-Bis(p-hydroxyphenyl)propane diglycidyl ether polymer	In Vitro	Some positive data exist, but the data are not sufficient for classification
Oxirane, Mono[(C12-14-Alkyloxy)Methyl]Derivatives	In vivo	Not mutagenic
Oxirane, Mono[(C12-14-Alkyloxy)Methyl]Derivatives	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
2,2-Bis(p-hydroxyphenyl)propane diglycidyl ether 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
2,2-Bis(p-hydroxyphenyl)propane diglycidyl ether polymer	Ingestion	Not classified for female reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
2,2-Bis(p-hydroxyphenyl)propane diglycidyl ether polymer	Ingestion	Not classified for male reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
2,2-Bis(p-hydroxyphenyl)propane diglycidyl ether polymer	Dermal	Not classified for development	Rabbit	NOAEL 300 mg/kg/day	during organogenesis
2,2-Bis(p-hydroxyphenyl)propane diglycidyl ether polymer	Ingestion	Not classified for development	Rat	NOAEL 750 mg/kg/day	2 generation
Oxirane, Mono[(C12-14-Alkyloxy)Methyl]Derivatives	Dermal	Not classified for development	Rat	NOAEL 200 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
Oxirane, Mono[(C12-14-Alkyloxy)Methyl]Derivatives	Dermal	heart | blood | liver | nervous system | kidney and/or bladder	Not classified	Rabbit	NOAEL 4,000 mg/kg	24 hours

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
2,2-Bis(p-hydroxyphenyl)propane diglycidyl ether polymer	Dermal	liver	Not classified	Rat	NOAEL 1,000 mg/kg/day	2 years
2,2-Bis(p-hydroxyphenyl)propane diglycidyl ether polymer	Dermal	nervous system	Not classified	Rat	NOAEL 1,000 mg/kg/day	13 weeks
2,2-Bis(p-hydroxyphenyl)propane diglycidyl ether 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
Oxirane, Mono[(C12-14-Alkyloxy)Methyl]Derivatives	Dermal	nervous system | respiratory system	Not classified	Rat	NOAEL 100 mg/kg/day	14 weeks
Oxirane, Mono[(C12-14-Alkyloxy)Methyl]Derivatives	Dermal	blood | liver | eyes | kidney and/or bladder	Not classified	Rat	NOAEL 100 mg/kg/day	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 labelling, an ingredient is not expected to be available for exposure, or the data is considered not relevant to the material as a whole.

12.1. Toxicity
Ecotoxic to the aquatic environment.
Acute Aquatic Toxicity: Category 2
Chronic Aquatic Toxicity: Category 2

No product test data available.

Material	CAS Number	Organism	Type	Exposure	Test endpoint	Test result
2,2-Bis(p-hydroxyphenyl)propane diglycidyl ether polymer	25085-99-8	Green algae	Estimated	72 hours	EC50	>11 mg/l
2,2-Bis(p-hydroxyphenyl)propane diglycidyl ether	25085-99-8	Rainbow trout	Estimated	96 hours	LC50	2 mg/l

polymer						
2,2-Bis(p-hydroxyphenyl)propane diglycidyl ether polymer	25085-99-8	Water flea	Estimated	48 hours	EC50	1.8 mg/l
2,2-Bis(p-hydroxyphenyl)propane diglycidyl ether polymer	25085-99-8	Green algae	Estimated	72 hours	NOEC	4.2 mg/l
2,2-Bis(p-hydroxyphenyl)propane diglycidyl ether polymer	25085-99-8	Water flea	Estimated	21 days	NOEC	0.3 mg/l
Oxirane, Mono[(C12-14-Alkyloxy)Methyl]Derivatives	68609-97-2	Green algae	Experimental	72 hours	IC50	843.75 mg/l
Oxirane, Mono[(C12-14-Alkyloxy)Methyl]Derivatives	68609-97-2	Rainbow trout	Experimental	96 hours	LC50	>5,000 mg/l
Oxirane, Mono[(C12-14-Alkyloxy)Methyl]Derivatives	68609-97-2	Water flea	Experimental	48 hours	EC50	7.2 mg/l
Oxirane, Mono[(C12-14-Alkyloxy)Methyl]Derivatives	68609-97-2	Green algae	Experimental	72 hours	NOEC	500 mg/l

12.2. Persistence and degradability

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
2,2-Bis(p-hydroxyphenyl)propane diglycidyl ether polymer	25085-99-8	Estimated Biodegradation	28 days	BOD	5 %BOD/COD	OECD 301F - Manometric respirometry
2,2-Bis(p-hydroxyphenyl)propane diglycidyl ether polymer	25085-99-8	Estimated Hydrolysis		Hydrolytic half-life	4.9 days (t 1/2)	
Oxirane, Mono[(C12-14-Alkyloxy)Methyl]Derivatives	68609-97-2	Experimental Biodegradation	28 days	BOD	34.7 % weight	OECD 301D - Closed bottle test

12.3 : Bioaccumulative potential

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
2,2-Bis(p-hydroxyphenyl)propane diglycidyl ether polymer	25085-99-8	Estimated Bioconcentration		Log Kow	3.242	
Oxirane, Mono[(C12-14-Alkyloxy)Methyl]Derivatives	68609-97-2	Experimental Bioconcentration		Log Kow	3.77	

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
In accordance with the Hazardous Substances (Disposal) Notice 2017 and the relevant criteria of the HSNO Act 1996.

Incinerate in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. As a disposal alternative, utilize an acceptable permitted waste disposal facility. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

Packaging (that may or may not contain any residual substance) may be lawfully disposed of by householders or other consumers through public or commercial waste collection services.

SECTION 14: Transport Information

New Zealand Land Transport Rule: Dangerous Goods - Road/Rail Transport
UN No.: Not applicable.
Proper Shipping Name: Not applicable.
Class/Division: Not applicable.
Sub Risk: Not applicable.
Packing Group: Not applicable.

Hazchem Code: Not applicable.
IERG: Not applicable.

International Air Transport Association (IATA) - Air Transport
UN No.: Not applicable.
Proper Shipping Name: Not applicable.
Class/Division: Not applicable.
Sub Risk: Not applicable.
Packing Group: Not applicable.

International Maritime Dangerous Goods Code (IMDG) - Marine Transport
UN No.: Not applicable.
Proper Shipping Name: Not applicable.
Class/Division: Not applicable.
Sub Risk: Not applicable.
Packing Group: Not applicable.
Marine Pollutant: Not applicable.

SECTION 15: Regulatory information

HSNO Approval number	HSR002670
Group standard name	Surface Coatings and Colourants (Subsidiary Hazard) Group Standard 2020
HSNO Hazard classification	Refer to Section 2: Hazard identification

NZ Inventory of Chemicals (NZIoC) Status
All applicable chemical ingredients in this material are in compliance with NZIoC listing requirements.

Controls in accordance with The Health and Safety at Work Act 2015, Health and Safety at Work (Hazardous Substances) Regulations 2017 and the HSNO Act 1996, Hazardous Substances (Hazardous Property Controls) Notice 2017

Certified handler	Not required
Location Compliance Certificate	Not required
Hazardous atmosphere zone	Not required
Fire extinguishers	Not required
Emergency response plan	100 L or 100 kg (for Hazardous to the aquatic environment Category 1 substances); or 1 000 L or 1 000 kg (for Acute toxicity Category 4, Skin sensitisation Category 1, Respiratory sensitisation Category 1, Hazardous to the aquatic environment Category 2 or Hazardous to the aquatic environment Category 3 substances); or 10 000 L or 10 000 kg (for Germ cell mutagenicity Category 1, Reproductive toxicity Category 1, Specific target organ toxicity Category 1, Serious eye damage Category 1, Hazardous to the aquatic environment Category 4 substances)
Secondary containment	100 L or 100 kg (for Hazardous to the aquatic environment Category 1 substances); or 1 000 L or 1 000 kg (for Acute toxicity Category 4, Skin sensitisation Category 1, Respiratory sensitisation Category 1, Hazardous to the aquatic environment Category 2 or Hazardous to the aquatic environment Category 3 substances); or 10 000 L or 10 000 kg (for Germ cell mutagenicity Category 1, Reproductive toxicity Category 1, Specific target organ toxicity Category 1, Serious eye damage Category 1, Hazardous to the aquatic environment Category 4 substances)
Tracking	Not required
Warning signage	100 L or 100 kg (for Hazardous to the aquatic environment Category 1 substances); or 1 000 L or 1 000 kg (for Serious eye damage Category 1, Hazardous to the aquatic environment Category 2 or Hazardous to the aquatic environment Category 3 substances); or 10 000 L or 10 000 kg (for Acute toxicity Category 4 or Hazardous to the aquatic environment Category 4 substances)

SECTION 16: Other information

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Complete document review.

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Key to abbreviations and acronyms
GHS refers to the Globally Harmonised System of Classification and Labelling of Chemicals, 7th revised edition of 2017
HSNO means Hazardous Substances and New Organisms Act 1996

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