



Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice (Safe Work Australia, December 2011)

IDENTIFICATION:

1.1. Product identifier

3M Scotchcast™ Flexible Power Cable Splicing Kits 82-F1, 82-F2, and 82-BF1 (2131)

Product Identification Numbers

80-6114-6835-8 80-6114-6836-6

1.2. Recommended use and restrictions on use

Recommended use

Electrical

1.3. Supplier's details

Address: 3M Australia - Building A, 1 Rivett Road, North Ryde NSW 2113
Telephone: 136 136
E Mail: productinfo.au@mmm.com
Website: www.3m.com.au

1.4. Emergency telephone number

Company Emergency Hotline: EMERGENCY: 1800 097 146 (Australia only)

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:

28-7666-2, 28-7650-6

One or more components of this KIT is classified as a hazardous chemical according to the Model Work Health and Safety Regulations, 2011.

TRANSPORT INFORMATION

For transportation and storage this KIT and its components are NOT classified as Dangerous Goods

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 Safety 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.

Greenguard® is a United States based program. The 'Low VOC' reference related to United States Federal and State regulations exemptions for some solvents.

3M Australia SDSs are available at www.3m.com.au



Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice (Safe Work Australia, December 2011)

SECTION 1: Identification

1.1. Product identifier

Scotchcast Flame-Retardant Compound 2131 (Part A)

Product Identification Numbers

80-6114-2633-1 80-6114-6840-8 80-6116-1242-7

1.2. Recommended use and restrictions on use

Recommended use

Electrical, Part A of two part electrical resin

For Industrial or Professional use only.

1.3. Supplier's details

Address: 3M Australia - Building A, 1 Rivett Road, North Ryde NSW 2113
Telephone: 136 136
E Mail: productinfo.au@mmm.com
Website: www.3m.com.au

1.4. Emergency telephone number

EMERGENCY: 1800 097 146 (Australia only)

SECTION 2: Hazard identification

This product is classified as a hazardous chemical according to the Model Work Health and Safety Regulations, 2011.

Refer to Section 14 of this Safety Data Sheets for product Dangerous Goods Classification.

2.1. Classification of the substance or mixture

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.

2.2. Label elements

The label elements below were prepared in accordance with the Code of Practice on Preparation of Safety Data Sheets for Hazardous Chemicals (Safe Work Australia, December 2011). This information may be different from the actual product label.

Signal word

DANGER!

Symbols

Exclamation mark | Health Hazard |

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.
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

Precautionary statements

Prevention:

P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P271	Use only outdoors or in a well-ventilated area.
P285	In case of inadequate ventilation wear respiratory protection.
P280A	Wear eye/face protection.
P280E	Wear protective gloves.
P270	Do not eat, drink or smoke when using this product.
P264	Wash thoroughly after handling.
P272	Contaminated work clothing should not be allowed out of the workplace.

Response:

P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
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 CENTRE 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.
P337 + P313	If eye irritation persists: Get medical advice/attention.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P332 + P313	If skin irritation occurs: Get medical advice/attention.

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P362 + P364	Take off contaminated clothing and wash it before reuse.
P363	Wash contaminated clothing before reuse.
P321	Specific treatment (see Notes to Physician on this label).
P312	Call a POISON CENTRE or doctor/physician if you feel unwell.
P314	Get medical advice/attention if you feel unwell.

Storage:

P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.

Disposal:

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

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

2.4. Other hazards which do not result in classification

May be harmful if swallowed.

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	CAS Nbr	% by Weight
Polyether-hydrocarbon-urethane polymer	154517-54-1	35 - 45
Diphenylmethane-4,4'-diisocyanate	101-68-8	25 - 35
1,1'-Methylenebis[isocyanatobenzene], homopolymer	39310-05-9	5 - 15
Diundecyl phthalate	3648-20-2	0 - 15
diundecyl phthalatye, branched and linear	85507-79-5	0 - 15
Methylenediphenyl diisocyanate	26447-40-5	< 2
4-Vinylcyclohexene	100-40-3	< 0.0005

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

Closed containers exposed to heat from fire may build pressure and explode.

Hazardous Decomposition or By-Products

<u>Substance</u>	<u>Condition</u>
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 authorised person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and Safety Data Sheet. Dispose of collected material as soon as possible.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

For industrial or professional use only. Do not use in a confined area with minimal air exchange. 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. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage including any incompatibilities

Store in a well-ventilated place. Keep cool. Keep container tightly closed to prevent contamination with water or air. If

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contamination is suspected, do not reseal container. Protect from sunlight. Store away from heat. Store away from strong bases. Store away from areas where product may come into contact with food or pharmaceuticals. Store in a dry place.

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
4-Vinylcyclohexene	100-40-3	ACGIH	TWA:0.1 ppm	A3: Confirmed animal carcinogen.
4-Vinylcyclohexene	100-40-3	AIHA	TWA:4.4 mg/m ³ (1 ppm)	
Free isocyanates	101-68-8	Manufacturer determined	TWA:0.005 ppm;STEL:0.02 ppm	
Free isocyanates	101-68-8	Australia OELs	TWA(as NCO)(8 hours):0.02 mg/m ³ ;STEL(as NCO)(15 minutes):0.07 mg/m ³	
Diphenylmethane-4,4'-diisocyanate	101-68-8	ACGIH	TWA:0.005 ppm	
Diphenylmethane-4,4'-diisocyanate	101-68-8	Australia OELs	TWA(8 hours):0.02 mg/m ³ ;STEL(15 minutes):0.07 mg/m ³	
Free isocyanates	26447-40-5	Manufacturer determined	TWA:0.005 ppm;STEL:0.02 ppm	
Free isocyanates	26447-40-5	Australia OELs	TWA(as NCO)(8 hours):0.02 mg/m ³ ;STEL(as NCO)(15 minutes):0.07 mg/m ³	

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

Australia OELs : Australia. Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment

CMRG : Chemical Manufacturer's Recommended Guidelines

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

Sen: Sensitiser

Sk: Absorption through the skin may be a significant source of exposure.

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.

Select and use eye protection in accordance with AS/NZS 1336. Eye protection should comply with the performance specifications of AS/NZS 1337.

Skin/hand protection

Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity.

Gloves made from the following material(s) are recommended: Butyl rubber.

Fluoroelastomer

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 – Butyl rubber

Apron - polymer laminate

Select and use gloves according to AS/NZ 2161.

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 vapours and particulates

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

Select and use respirators according to AS/NZS 1715. Respirators should comply with AS/NZS 1716 performance specifications. For information about respirators, call 3M on 1800 024 464.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical state	Liquid.
Appearance/Odour	Light straw coloured liquid with pungent odour.
Odour threshold	<i>No data available.</i>
pH	<i>Not applicable.</i>
Melting point/Freezing point	<i>Not applicable.</i>
Boiling point/Initial boiling point/Boiling range	≥ 148.9 °C
Flash point	≥ 148.9 °C [<i>Test Method: Closed Cup</i>]
Evaporation rate	<i>No data available.</i>
Flammability (solid, gas)	Not applicable.
Flammable Limits(LEL)	<i>No data available.</i>
Flammable Limits(UEL)	<i>No data available.</i>
Vapour pressure	<i>No data available.</i>
Vapour density	<i>No data available.</i>
Density	<i>No data available.</i>
Relative density	1.08 [<i>Ref Std: WATER=1</i>]
Water solubility	Nil
Solubility- non-water	<i>No data available.</i>
Partition coefficient: n-octanol/water	<i>No data available.</i>
Autoignition temperature	<i>No data available.</i>
Decomposition temperature	<i>No data available.</i>
Viscosity	700 - 900 mPa-s
Average particle size	<i>No data available.</i>
Bulk density	<i>No data available.</i>
Molecular weight	<i>No data available.</i>

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Volatile organic compounds (VOC)	<i>No data available.</i>
Percent volatile	Nil
Softening point	<i>No data available.</i>
VOC less H2O & exempt solvents	<i>No data available.</i>

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. Conditions to avoid

None known.

10.4. Possibility of hazardous reactions

Hazardous polymerisation may occur.

10.5 Incompatible materials

Strong bases.

Alcohols.

Water

No data available.

10.6 Hazardous decomposition products

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

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. 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.

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Eye contact

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

Ingestion

May be harmful if swallowed.

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

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.

Additional information:

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

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
Polyether-hydrocarbon-urethane polymer	Dermal		LD50 estimated to be > 5,000 mg/kg
Polyether-hydrocarbon-urethane polymer	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
Diphenylmethane-4,4'-diisocyanate	Dermal	Rabbit	LD50 > 5,000 mg/kg
Diphenylmethane-4,4'-diisocyanate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 0.368 mg/l
Diphenylmethane-4,4'-diisocyanate	Ingestion	Rat	LD50 31,600 mg/kg
Diundecyl phthalate	Dermal	Rabbit	LD50 > 7,900 mg/kg
Diundecyl phthalate	Ingestion	Rat	LD50 > 15,000 mg/kg
Methylenediphenyl diisocyanate	Dermal	Rabbit	LD50 > 5,000 mg/kg
Methylenediphenyl diisocyanate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 0.368 mg/l
Methylenediphenyl diisocyanate	Ingestion	Rat	LD50 31,600 mg/kg
4-Vinylcyclohexene	Dermal		LD50 estimated to be > 5,000 mg/kg
4-Vinylcyclohexene	Ingestion	Rat	LD50 6,300 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Diphenylmethane-4,4'-diisocyanate	official classification	Irritant
Methylenediphenyl diisocyanate	official classification	Irritant
4-Vinylcyclohexene	Rabbit	Irritant

Serious Eye Damage/Irritation

Name	Species	Value
Diphenylmethane-4,4'-diisocyanate	official classification	Severe irritant
Methylenediphenyl diisocyanate	official classification	Severe irritant
4-Vinylcyclohexene	Rabbit	Mild irritant

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Skin Sensitisation

Name	Species	Value
Diphenylmethane-4,4'-diisocyanate	official classification	Sensitising
Methylenediphenyl diisocyanate	official classification	Sensitising

Respiratory Sensitisation

Name	Species	Value
Diphenylmethane-4,4'-diisocyanate	Human	Sensitising
Methylenediphenyl diisocyanate	Human	Sensitising

Germ Cell Mutagenicity

Name	Route	Value
Diphenylmethane-4,4'-diisocyanate	In Vitro	Some positive data exist, but the data are not sufficient for classification
Methylenediphenyl diisocyanate	In Vitro	Some positive data exist, but the data are not sufficient for classification
4-Vinylcyclohexene	In Vitro	Not mutagenic
4-Vinylcyclohexene	In vivo	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Diphenylmethane-4,4'-diisocyanate	Inhalation	Rat	Some positive data exist, but the data are not sufficient for classification
Methylenediphenyl diisocyanate	Inhalation	Rat	Some positive data exist, but the data are not sufficient for classification
4-Vinylcyclohexene	Ingestion	Mouse	Carcinogenic.

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
Diphenylmethane-4,4'-diisocyanate	Inhalation	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 0.004 mg/l	during organogenesis
Methylenediphenyl diisocyanate	Inhalation	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 0.004 mg/l	during organogenesis
4-Vinylcyclohexene	Ingestion	Some positive male reproductive data exist, but the data are not sufficient for classification	Mouse	NOAEL 500 mg/kg/day	13 weeks
4-Vinylcyclohexene	Ingestion	Toxic to female reproduction	Mouse	NOAEL 600 mg/kg/day	13 weeks
4-Vinylcyclohexene	Inhalation	Toxic to female reproduction	Mouse	NOAEL 1.1 mg/l	13 weeks

Target Organ(s)

Specific Target Organ Toxicity - single exposure

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Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Diphenylmethane-4,4'-diisocyanate	Inhalation	respiratory irritation	May cause respiratory irritation	official classification	NOAEL Not available	
Methylenediphenyl diisocyanate	Inhalation	respiratory irritation	May cause respiratory irritation	official classification	NOAEL Not available	
4-Vinylcyclohexene	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL NA	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Diphenylmethane-4,4'-diisocyanate	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0.004 mg/l	13 weeks
Methylenediphenyl diisocyanate	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0.004 mg/l	13 weeks
4-Vinylcyclohexene	Inhalation	liver kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 4.4 mg/l	13 weeks
4-Vinylcyclohexene	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 800 mg/kg/day	13 weeks

Aspiration Hazard

Name	Value
4-Vinylcyclohexene	Aspiration hazard

Exposure Levels

Refer Section 8.1 Control Parameters of this Safety Data Sheet.

Interactive Effects

Not determined.

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**Acute aquatic hazard:**

Not acutely toxic to aquatic life by GHS criteria.

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Chronic aquatic hazard:

Not chronically toxic to aquatic life by GHS criteria.

No product test data available.

Material	CAS Number	Organism	Type	Exposure	Test endpoint	Test result
4-Vinylcyclohexene	100-40-3	Ricefish	Experimental	96 hours	LC50	4.6 mg/l
4-Vinylcyclohexene	100-40-3	Water flea	Experimental	48 days	EC50	1.9 mg/l
4-Vinylcyclohexene	100-40-3	Green algae	Experimental	72 hours	EC50	>4.1 mg/l
4-Vinylcyclohexene	100-40-3	Water flea	Experimental	21 days	NOEC	0.23 mg/l
4-Vinylcyclohexene	100-40-3	Green algae	Experimental	72 hours	NOEC	2.2 mg/l
Methylenediphenyl diisocyanate	26447-40-5		Data not available or insufficient for classification			
Diundecyl phthalate	3648-20-2	Water flea	Experimental	21 days	NOEC	0.35 mg/l
Diundecyl phthalate	3648-20-2	Sheepshead Minnow	Experimental	96 hours	LC50	>0.22 mg/l
Diundecyl phthalate	3648-20-2	Water flea	Experimental	48 hours	EC50	12 mg/l
Diundecyl phthalate	3648-20-2	Green Algae	Experimental	96 hours	EC50	>2.1 mg/l
Diundecyl phthalate	3648-20-2	Fathead minnow	Experimental	96 hours	LC50	>100 mg/l
Diundecyl phthalate	3648-20-2	Water flea	Experimental	21 days	NOEC	0.35 mg/l
Diphenylmethane-4,4'-diisocyanate	101-68-8		Data not available or insufficient for classification			
diundecyl phthalate, branched and linear	85507-79-5		Data not available or insufficient for classification			
Polyether-hydrocarbon-urethane polymer	154517-54-1		Data not available or insufficient for classification			
1,1'-Methylenebis[isocyanatobenzene], homopolymer	39310-05-9	Zebra Fish	Estimated	24 hours	LC50	>100 mg/l

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12.2. Persistence and degradability

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
4-Vinylcyclohexene	100-40-3	Estimated Photolysis		Photolytic half-life (in air)	4.3 hours (t 1/2)	Other methods
4-Vinylcyclohexene	100-40-3	Experimental Biodegradation	28 days	BOD	0 % weight	OECD 301C - MITI test (I)
Diphenylmethane-4,4'-diisocyanate	101-68-8	Experimental Hydrolysis		Hydrolytic half-life	<2 hours (t 1/2)	Other methods
Diphenylmethane-4,4'-diisocyanate	101-68-8	Experimental Biodegradation	28 days	BOD	0 % weight	OECD 301C - MITI test (I)
Polyether-hydrocarbon-urethane polymer	154517-54-1	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Methylenediphenyl diisocyanate	26447-40-5	Experimental Hydrolysis		Hydrolytic half-life	<2 hours (t 1/2)	Other methods
Methylenediphenyl diisocyanate	26447-40-5	Experimental Biodegradation	28 days	BOD	0 % weight	OECD 301C - MITI test (I)
Diundecyl phthalate	3648-20-2	Experimental Biodegradation	28 days	CO2 evolution	76 % weight	Other methods
1,1'-Methylenebis[isocyanatobenzene], homopolymer	39310-05-9	Estimated Hydrolysis		Hydrolytic half-life	<2 hours (t 1/2)	Other methods
1,1'-Methylenebis[isocyanatobenzene], homopolymer	39310-05-9	Estimated Biodegradation	28 days	BOD	0 % weight	OECD 301C - MITI test (I)
diundecyl phthalate, branched and linear	85507-79-5	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

12.3 : Bioaccumulative potential

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
4-Vinylcyclohexene	100-40-3	Experimental BCF-Carp	56 days	Bioaccumulation factor	211	Other methods
Diphenylmethane-4,4'-diisocyanate	101-68-8	Experimental BCF-Carp	28 days	Bioaccumulation factor	200	Other methods
Polyether-hydrocarbon-urethane	154517-54-1	Data not available or insufficient for	N/A	N/A	N/A	N/A

Scotchcast Flame-Retardant Compound 2131 (Part A)

polymer		classification				
Methylenediphenyl diisocyanate	26447-40-5	Experimental BCF-Carp	28 days	Bioaccumulation factor	200	Other methods
Diundecyl phthalate	3648-20-2	Experimental BCF - Other		Bioaccumulation factor	207	Other methods
Diundecyl phthalate	3648-20-2	Estimated Bioconcentration		Bioaccumulation factor	7.4	Estimated: Bioconcentration factor
1,1'-Methylenebis[isocyanatobenzene], homopolymer	39310-05-9	Estimated BCF-Carp	28 days	Bioaccumulation factor	200	Other methods
diundecyl phthalate, branched and linear	85507-79-5	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**

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

Incinerate in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes.

SECTION 14: Transport Information**Australian Dangerous Goods Code (ADG) - 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

Scotchcast Flame-Retardant Compound 2131 (Part A)

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

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Australian Inventory Status:

An ingredient(s) in this product is being introduced under a Low Volume Chemical Permit granted under Section 21U of the Industrial Chemicals (Notification and Assessment) Act 1989 as amended.

Poison Schedule: This product has not been assessed for poisons scheduling as the product is intended for industrial and professional use only.

SECTION 16: Other information

Revision information:

Conversion to GHS format SDS.

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 Safety 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.

Greenguard® is a United States based program. The 'Low VOC' reference related to United States Federal and State regulations exemptions for some solvents.

3M Australia SDSs are available at www.3m.com.au



Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice (Safe Work Australia, December 2011)

SECTION 1: Identification

1.1. Product identifier

3M™ Scotchcast™ Flame Retardant Resin 2131 (PART B)

Product Identification Numbers

80-6114-6841-6 80-6116-1288-0

1.2. Recommended use and restrictions on use

Recommended use

Electrical, Part B of two part electrical resin

For Industrial or Professional use only.

1.3. Supplier's details

Address: 3M Australia - Building A, 1 Rivett Road, North Ryde NSW 2113
Telephone: 136 136
E Mail: productinfo.au@mmm.com
Website: www.3m.com.au

1.4. Emergency telephone number

EMERGENCY: 1800 097 146 (Australia only)

SECTION 2: Hazard identification

This product is classified as a hazardous chemical according to the Model Work Health and Safety Regulations, 2011.

Refer to Section 14 of this Safety Data Sheets for product Dangerous Goods Classification.

2.1. Classification of the substance or mixture

Serious Eye Damage/Irritation: Category 1.
Carcinogenicity: Category 2.

2.2. Label elements

The label elements below were prepared in accordance with the Code of Practice on Preparation of Safety Data Sheets for Hazardous Chemicals (Safe Work Australia, December 2011). This information may be different from the actual product label.

3M™ Scotchcast™ Flame Retardant Resin 2131 (PART B)

Signal word

DANGER!

Symbols

Corrosion | Health Hazard |

Pictograms



Hazard statements

H318 Causes serious eye damage.
H351 Suspected of causing cancer.

Precautionary statements

Prevention:

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P280A Wear eye/face protection.
P281 Use personal protective equipment as required.

Response:

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTRE or doctor/physician.
P308 + P313 IF exposed or concerned: Get medical advice/attention.

Storage:

P405 Store locked up.

Disposal:

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

2.3. Other assigned/identified product hazards

None known.

2.4. Other hazards which do not result in classification

Harmful to aquatic life.

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	CAS Nbr	% by Weight
Homopolymer	69102-90-5	20 - 30
1,1'-(Ethane-1,2-diyl)bis[pentabromobenzene]	84852-53-9	22 - 25
diundecyl phthalatye, branched and linear	85507-79-5	10 - 20
Silicic acid, aluminum potassium sodium	12736-96-8	1 - 10

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salt		
Diantimony pentoxide	1314-60-9	5 - 10
Castor oil	8001-79-4	1 - 10
1,1'-Phenyliminodipropan-2-ol	3077-13-2	4 - 10
Polypropylene ether diol	25322-69-4	5 - 10
Dipropylene glycol	25265-71-8	3 - 6
Carbon black	1333-86-4	< 2
Octadecyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate	2082-79-3	< 1.0
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	68909-20-6	0.5 - 1
1,4-diazabicyclooctane	280-57-9	< 1.0

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**

Carbon monoxide.
Carbon dioxide.
Oxides of nitrogen.
Oxides of antimony.

Condition

During combustion.
During combustion.
During combustion.
During combustion.

5.3. Special protective actions for fire-fighters

3M™ Scotchcast™ Flame Retardant Resin 2131 (PART B)

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. 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.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Do not handle until all safety precautions have been read and understood. 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. Avoid release to the environment. Use personal protective equipment (eg. gloves, respirators...) as required.

7.2. Conditions for safe storage including any incompatibilities

Keep container tightly closed. Keep cool. Store away from heat. Store in a dry place.

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
Carbon black	1333-86-4	ACGIH	TWA(inhalable fraction):3 mg/m3	A3: Confirmed animal carcinogen.
Carbon black	1333-86-4	Australia OELs	TWA(8 hours): 3 mg/m3	
Polypropylene ether diol	25322-69-4	AIHA	TWA(as aerosol):10 mg/m3	

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

Australia OELs : Australia. Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment

CMRG : Chemical Manufacturer's Recommended Guidelines

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

Sen: Sensitiser

Sk: Absorption through the skin may be a significant source of exposure.

8.2. Exposure controls

8.2.1. Engineering controls

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Use with appropriate local exhaust ventilation. Provide appropriate local exhaust ventilation on open containers.

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.

Select and use eye protection in accordance with AS/NZS 1336. Eye protection should comply with the performance specifications of AS/NZS 1337.

Skin/hand protection

No chemical protective gloves are required.

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 vapours and particulates

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

Select and use respirators according to AS/NZS 1715. Respirators should comply with AS/NZS 1716 performance specifications. For information about respirators, call 3M on 1800 024 464.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid.
Appearance/Odour	Smooth black liquid with pungent odour.
Odour threshold	<i>No data available.</i>
pH	<i>Not applicable.</i>
Melting point/Freezing point	<i>Not applicable.</i>
Boiling point/Initial boiling point/Boiling range	> 143.3 °C
Flash point	> 143.3 °C [<i>Test Method: Closed Cup</i>]
Evaporation rate	<i>No data available.</i>
Flammability (solid, gas)	Not applicable.
Flammable Limits(LEL)	<i>No data available.</i>
Flammable Limits(UEL)	<i>No data available.</i>
Vapour pressure	< 186,140.2 Pa [<i>@ 55 °C</i>]
Vapour density	<i>No data available.</i>
Density	<i>No data available.</i>
Relative density	1.29 [<i>Ref Std: WATER=1</i>]
Water solubility	Nil
Solubility- non-water	<i>No data available.</i>
Partition coefficient: n-octanol/water	<i>No data available.</i>
Autoignition temperature	<i>No data available.</i>
Decomposition temperature	<i>No data available.</i>
Viscosity	5,500 mPa-s
Molecular weight	<i>No data available.</i>
Volatile organic compounds (VOC)	<i>No data available.</i>

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. Conditions to avoid

None known.

10.4. Possibility of hazardous reactions

Hazardous polymerisation will not occur.

10.5 Incompatible materials

None known.

10.6 Hazardous decomposition products

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

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. May cause additional health effects (see below).

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

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

Additional Health Effects:

3M™ Scotchcast™ Flame Retardant Resin 2131 (PART B)**Carcinogenicity:**

Contains a chemical or chemicals which can cause cancer.

Toxicological Data

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

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE >5,000 mg/kg
Overall product	Inhalation-Dust/Mist(4 hr)		No data available; calculated ATE >12.5 mg/l
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
Homopolymer	Dermal		LD50 estimated to be > 5,000 mg/kg
Homopolymer	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
Polypropylene ether diol	Dermal	Rabbit	LD50 > 10,000 mg/kg
Polypropylene ether diol	Ingestion	Rat	LD50 > 2,000 mg/kg
1,1'-Phenyliminodipropan-2-ol	Dermal	Rabbit	LD50 > 2,000 mg/kg
1,1'-Phenyliminodipropan-2-ol	Ingestion	Rat	LD50 3,800 mg/kg
Castor oil	Dermal		LD50 estimated to be > 5,000
Castor oil	Ingestion		LD50 estimated to be > 5,000
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
Carbon black	Dermal	Rabbit	LD50 > 3,000 mg/kg
Carbon black	Ingestion	Rat	LD50 > 8,000 mg/kg
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
1,4-diazabicyclooctane	Dermal	Rabbit	LD50 > 3,200 mg/kg
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	Ingestion	Rat	LD50 > 5,110 mg/kg
1,4-diazabicyclooctane	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5.05 mg/l
1,4-diazabicyclooctane	Ingestion	Rat	LD50 1,870 mg/kg
Octadecyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate	Dermal	Rat	LD50 > 2,000 mg/kg
Octadecyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 1.8 mg/l
Octadecyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate	Ingestion	Rat	LD50 > 5,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Polypropylene ether diol	Rabbit	No significant irritation
1,1'-Phenyliminodipropan-2-ol	Professional judgement	Minimal irritation
Castor oil	Human	Minimal irritation
Dipropylene glycol	Rabbit	No significant irritation
Carbon black	Rabbit	No significant irritation

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Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	Rabbit	No significant irritation
1,4-diazabicyclooctane	Rabbit	Mild irritant
Octadecyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate	Rabbit	Minimal irritation

Serious Eye Damage/Irritation

Name	Species	Value
Polypropylene ether diol	Rabbit	No significant irritation
1,1'-Phenyliminodipropan-2-ol	Professional judgement	Corrosive
Castor oil	Rabbit	Mild irritant
Dipropylene glycol	Rabbit	No significant irritation
Carbon black	Rabbit	No significant irritation
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	Rabbit	No significant irritation
1,4-diazabicyclooctane	Rabbit	Corrosive
Octadecyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate	Rabbit	Mild irritant

Skin Sensitisation

Name	Species	Value
Castor oil	Human	Some positive data exist, but the data are not sufficient for classification
Dipropylene glycol	Guinea pig	Not sensitizing
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	Human and animal	Not sensitizing
Octadecyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate	Human and animal	Some positive data exist, but the data are not sufficient for classification

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
Castor oil	In Vitro	Not mutagenic
Castor oil	In vivo	Not mutagenic
Dipropylene glycol	In Vitro	Not mutagenic
Dipropylene glycol	In vivo	Not mutagenic
Carbon black	In Vitro	Not mutagenic
Carbon black	In vivo	Some positive data exist, but the data are not sufficient for classification
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	In Vitro	Not mutagenic
Octadecyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate	In Vitro	Not mutagenic
Octadecyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate	In vivo	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Dipropylene glycol	Ingestion	Multiple animal species	Not carcinogenic
Carbon black	Dermal	Mouse	Not carcinogenic
Carbon black	Ingestion	Mouse	Not carcinogenic
Carbon black	Inhalation	Rat	Carcinogenic.

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Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	Not specified.	Mouse	Some positive data exist, but the data are not sufficient for classification
Octadecyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate	Ingestion	Mouse	Not carcinogenic

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

Name	Route	Value	Species	Test result	Exposure Duration
Dipropylene glycol	Ingestion	Not toxic to development	Rat	NOAEL 5,000 mg/kg/day	during organogenesis
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	Ingestion	Not toxic to female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	Ingestion	Not toxic to male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	Ingestion	Not toxic to development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
Octadecyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate	Ingestion	Not toxic to female reproduction	Rat	NOAEL 421 mg/kg/day	2 generation
Octadecyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate	Ingestion	Not toxic to male reproduction	Rat	NOAEL 375 mg/kg/day	2 generation
Octadecyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate	Ingestion	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 421 mg/kg/day	2 generation

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
Castor oil	Ingestion	heart hematopoietic system liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 4,800 mg/kg/day	13 weeks
Castor oil	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 13,000 mg/kg/day	13 weeks

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Dipropylene glycol	Ingestion	respiratory system heart	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 470 mg/kg/day	105 weeks
Dipropylene glycol	Ingestion	endocrine system liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 3,040 mg/kg/day	105 weeks
Dipropylene glycol	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	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	All data are negative	Rat	NOAEL 3,040 mg/kg/day	105 weeks
Carbon black	Inhalation	pneumoconiosis	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	Inhalation	respiratory system silicosis	All data are negative	Human	NOAEL Not available	occupational exposure
Octadecyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate	Ingestion	liver kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 300 mg/kg/day	28 days
Octadecyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate	Ingestion	heart endocrine system respiratory system	All data are negative	Rat	NOAEL 300 mg/kg/day	28 days
Octadecyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate	Ingestion	hematopoietic system	All data are negative	Rat	NOAEL 1,000 mg/kg/day	28 days

Aspiration Hazard

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

Exposure Levels

Refer Section 8.1 Control Parameters of this Safety Data Sheet.

Interactive Effects

Not determined.

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**Chronic aquatic hazard:**

Not chronically toxic to aquatic life by GHS criteria.

No product test data available.

Material	CAS Number	Organism	Type	Exposure	Test endpoint	Test result
Octadecyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate	2082-79-3	Water flea	Experimental	24 hours	EC50	>100 mg/l
Octadecyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate	2082-79-3	Green algae	Experimental	72 hours	EC50	>100 mg/l
Octadecyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate	2082-79-3	Bluegill	Experimental	96 hours	LC50	>100 mg/l
Octadecyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate	2082-79-3	Green algae	Experimental	72 hours	NOEC	>100 mg/l
Dipropylene glycol	25265-71-8	Goldfish	Experimental	96 hours	LC50	>5,000 mg/l
Castor oil	8001-79-4	Zebra Fish	Experimental	96 hours	LC50	>10,000 mg/l
1,4-diazabicyclooctane	280-57-9	Water flea	Laboratory	48 hours	EC50	>92 mg/l
1,4-diazabicyclooctane	280-57-9	Green algae	Laboratory	72 hours	EC50	180 mg/l
1,1'-(Ethane-1,2-diyl)bis[pentabromobenzene]	84852-53-9		Data not available or insufficient for classification			
diundecyl phthalate, branched and linear	85507-79-5		Data not available or insufficient for classification			
Silanamine,	68909-20-6	Algae	Estimated	72 hours	EC50	>100 mg/l

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1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica						
Carbon black	1333-86-4		Data not available or insufficient for classification			
Polypropylene ether diol	25322-69-4	Inland Silverside	Laboratory	96 hours	LC50	650 mg/l
Diantimony pentoxide	1314-60-9	Fish other	Experimental	96 hours	LC50	9.2 mg/l
Silicic acid, aluminum potassium sodium salt	12736-96-8		Data not available or insufficient for classification			
Homopolymer	69102-90-5		Data not available or insufficient for classification			
1,1'-Phenyliminodi propan-2-ol	3077-13-2		Data not available or insufficient for classification			

12.2. Persistence and degradability

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Dipropylene glycol	25265-71-8	Modeled Photolysis		Photolytic half-life (in air)	1.03 days (t _{1/2})	Other methods
Silicic acid, aluminum potassium sodium salt	12736-96-8	Experimental Hydrolysis		Hydrolytic half-life	2 months (t _{1/2})	Other methods
Homopolymer	69102-90-5	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
diundecyl phthalate, branched and linear	85507-79-5	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
1,1'-(Ethane-1,2-diyl)bis[pentabromobenzene]	84852-53-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
1,1'-Phenyliminodi propan-2-ol	3077-13-2	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Diantimony pentoxide	1314-60-9	Data not available or insufficient for	N/A	N/A	N/A	N/A

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		classification				
Polypropylene ether diol	25322-69-4	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Carbon black	1333-86-4	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Castor oil	8001-79-4	Estimated Biodegradation	28 days	CO2 evolution	71.3% % weight	OECD 301B - Modified sturm or CO2
Dipropylene glycol	25265-71-8	Experimental Biodegradation	28 days	BOD	16 % weight	OECD 301D - Closed bottle test
Octadecyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate	2082-79-3	Experimental Biodegradation	28 days	BOD	31 % weight	OECD 301C - MITI test (I)
Castor oil	8001-79-4	Experimental Biodegradation	28 days	BOD	64 % weight	OECD 301D - Closed bottle test
1,4-diazabicyclooctane	280-57-9	Laboratory Photolysis		Photolytic half-life (in air)	17.5 hours (t 1/2)	Other methods
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	68909-20-6	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
1,4-diazabicyclooctane	280-57-9	Laboratory Biodegradation	28 days	BOD	0 % weight	OECD 301C - MITI test (I)

12.3 : Bioaccumulative potential

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Diantimony pentoxide	1314-60-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Homopolymer	69102-90-5	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
diundecyl phthalatye, branched and linear	85507-79-5	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Polypropylene ether diol	25322-69-4	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Carbon black	1333-86-4	Data not available or	N/A	N/A	N/A	N/A

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		insufficient for classification				
Silicic acid, aluminum potassium sodium salt	12736-96-8	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Castor oil	8001-79-4	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
1,1'-Phenyliminodi propan-2-ol	3077-13-2	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
1,1'-(Ethane-1,2-diyl)bis[pentabromobenzene]	84852-53-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Dipropylene glycol	25265-71-8	Experimental BCF - Other	42 days	Bioaccumulation factor	4.6	OECD 305E - Bioaccumulation flow-through fish test
Octadecyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate	2082-79-3	Experimental BCF-Carp	42 days	Bioaccumulation factor	<12	Other methods
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	68909-20-6	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
1,4-diazabicyclooctane	280-57-9	Laboratory BCF - Other	42 days	Bioaccumulation factor	<13	Other methods

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**

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

Incinerate uncured product in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes.

SECTION 14: Transport Information**Australian Dangerous Goods Code (ADG) - Road/Rail Transport**

3M™ Scotchcast™ Flame Retardant Resin 2131 (PART B)

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

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Australian Inventory Status:

An ingredient(s) in this product is being introduced under Section 21U of the Industrial Chemicals (Notification and Assessment) Act 1989 as amended.

Poison Schedule: This product has not been assessed for poisons scheduling as the product is intended for industrial and professional use only.

SECTION 16: Other information

Revision information:

Conversion to GHS format SDS.

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 Safety 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.

Greenguard ® is a United States based program. The 'Low VOC' reference related to United States Federal and State regulations exemptions for some solvents.

3M Australia SDSs are available at www.3m.com.au