Safety Data Sheet

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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™ Soft Cast Standard Colors

Product Identification Numbers

YP-2060-6000-3	YP-2060-6003-7	YP-2060-6004-5	YP-2060-6005-2	YP-2060-6006-0
YP-2060-6007-8	YP-2060-6008-6	YP-2060-6012-8	YP-2060-6013-6	YP-2060-6014-4
YP-2060-6015-1				

1.2. Recommended use and restrictions on use

Recommended use
Casting tape for orthopaedic use, Immobilisation of upper and lower extremities

For 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
Respiratory Sensitiser: Category 1
Skin Sensitiser: Category 1
Specific Target Organ Toxicity (repeated exposure): Category 2

2.2. Label elements

SIGNAL WORD
Danger

Symbols:
Health Hazard |

Pictograms

HAZARD STATEMENTS:

H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317	May cause an allergic skin reaction.
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.
P272	Contaminated work clothing should not be allowed out of the workplace.
P284	Wear respiratory protection.

Response

P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P314	Get medical advice/attention if you feel unwell.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P342 + P311	If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
P362 + P364	Take off contaminated clothing and wash it before reuse.

Disposal

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

2.3. Other hazards
Persons previously sensitized to isocyanates may develop a cross-sensitization reaction to other isocyanates.

SECTION 3: Composition/information on ingredients

Ingredient	CAS Nbr	% by Weight
Oxide glass chemicals	65997-17-3	40 - 70
4,4'-Diphenylmethane Diisocyanate-Polypropylene Glycol Polymer	9048-57-1	20 - 40
1,1'-Methylenebis(Isocyanatobenzene)	26447-40-5	1.5 - 3.5
2,2'-dimorpholinyldiethyl ether	6425-39-4	1 - 3
2,6-Di-Tert-Butyl-P-Cresol	128-37-0	0.05 - 0.5

SECTION 4: First aid measures

4.1. Description of first aid measures

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

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

Eye contact
Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, 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
No critical symptoms or effects. See Section 11.1, information on toxicological effects.

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

SECTION 5: Fire-fighting measures

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

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

Hazardous Decomposition or By-Products

Substance	Condition
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.

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.

6.3. Methods and material for containment and cleaning up
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. 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
For industrial/occupational use only. Not for consumer sale or use. 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. Avoid contact with oxidising agents (eg. chlorine, chromic acid etc.)

7.2. Conditions for safe storage including any incompatibilities
Keep container tightly closed. Store away from heat. Store away from strong bases. Store away from oxidising agents. Store away from amines.

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
2,6-Di-Tert-Butyl-P-Cresol	128-37-0	ACGIH	TWA(inhalable fraction and vapor):2 mg/m3	A4: Not class. as human carcinogin
2,6-Di-Tert-Butyl-P-Cresol	128-37-0	New Zealand WES	TWA(8 hours):10 mg/m3	Dermal sensitizer
Free isocyanates	26447-40-5	New Zealand WES	TWA(as NCO)(8 hours):0.02 mg/m3;STEL(as NCO)(15 minutes):0.07 mg/m3	Capable of csng resp/skin sens, Dermal sensitiser, Respiratory sensitiser
Ceramic fibres	65997-17-3	ACGIH	TWA(as fiber):0.2 fiber/cc	A2: Suspected human carcin.
CONTINUOUS FILAMENT GLASS FIBERS	65997-17-3	ACGIH	TWA(as fiber):1 fiber/cc	A4: Not class. as human carcinogin
CONTINUOUS FILAMENT GLASS FIBERS, INHALABLE FRACTION	65997-17-3	ACGIH	TWA(inhalable fraction):5 mg/m3	A4: Not class. as human carcinogin
Glass filaments	65997-17-3	New Zealand WES	TWA(Respirable fibers)(8 hours):1 f/mL;TWA(as respirable dust)(8 hours):1 f/mL;TWA(as inhalable dust)(8 hours):5 mg/m3	
GLASS WOOL FIBERS	65997-17-3	ACGIH	TWA(as fiber):1 fiber/cc	A3: Confirmed animal carcinogen.
Oxide glass chemicals	65997-17-3	Manufacturer determined	TWA(as non-fibrous, respirable)(8 hours):3 mg/m3;TWA(as non-fibrous, inhalable fraction)(8 hours):10 mg/m3	
ROCK WOOL FIBERS	65997-17-3	ACGIH	TWA(as fiber):1 fiber/cc	A3: Confirmed animal

				carcinogen.
SLAG WOOL FIBERS	65997-17-3	ACGIH	TWA(as fiber):1 fiber/cc	A3: Confirmed animal carcinogen.
SPECIAL PURPOSE GLASS FIBERS	65997-17-3	ACGIH	TWA(as fiber):1 fiber/cc	A3: Confirmed animal carcinogen.

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/m³: 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
None required.

Skin/hand protection
Gloves providing sufficient protection must be worn while applying the casting tape. E.g. nitrile gloves with a minimum thickness of 0.127 mm (5 mil, 0.005 inch) have proven to provide effective protection. The cast surface should be free of monomer and polymer isocyanate within 30 minutes when proper wetting techniques are used.

Respiratory protection

Results from air sampling during simulated product application show that vapours of methylenediphenyl-diisocyanate as used in the product are not detectable during use in Health Care facility cast rooms. Detection limits were extremely low and far below international safety recommendations for working with isocyanates. Under normal use conditions, airborne exposures are not expected to be significant enough to require respiratory protection. People with bronchial problems or with isocyanate sensitivity may still respond to low isocyanate concentrations. In general it is recommended to use synthetic casting material in rooms with normal general/dilution ventilation.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Solid.
Specific Physical Form:	Paste imbedded on knit fibreglass.
Colour	Bright Blue, Bright Green, Bright Red, White
Odour	Slight Odour
Odour threshold	*No data available.*
pH	*Not applicable.*
Melting point/Freezing point	*No data available.*
Boiling point/Initial boiling point/Boiling range	*No data available.*
Flash point	*Not applicable.*
Evaporation rate	*Not applicable.*
Flammability (solid, gas)	Not classified
Flammable Limits(LEL)	*Not applicable.*
Flammable Limits(UEL)	*Not applicable.*

Vapour pressure	<= 186,158.4 Pa [@ 55 ºC]
Vapor Density and/or Relative Vapor Density	*Not applicable.*
Density	1.09 g/ml
Relative density	1.09 [*Ref Std:*WATER=1] [*Details:*g/cm3]
Water solubility	Nil
Solubility- non-water	*No data available.*
Partition coefficient: n-octanol/water	*No data available.*
Autoignition temperature	*No data available.*
Decomposition temperature	*No data available.*
Viscosity/Kinematic Viscosity	30 - 1,000,000 mPa-s [@ 23 ºC]
Volatile organic compounds (VOC)	*No data available.*
Percent volatile	*Not applicable.*
VOC less H2O & exempt solvents	*No data available.*

SECTION 10: Stability and reactivity

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

10.2 Chemical stability
Stable.

10.3 Possibility of hazardous reactions
Hazardous polymerisation will not occur.

10.4 Conditions to avoid
Heat.
Sparks and/or flames.

10.5 Incompatible materials
Alcohols.
Amines.
Strong bases.
Strong oxidising agents.
Strong oxidising agents.

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. Allergic respiratory reaction: Signs/symptoms may include difficulty breathing, wheezing, cough, and tightness of chest. May cause target organ effects after inhalation. May cause additional health effects (see below).

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

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. Results from air sampling for simulated dry and wet product application show that vapours of methylenediphenyl-diisocyanate as used in the product are not detectable during use. Detection limits were extremely low and far below international safety recommendations for working with isocyanates. People with bronchial problems or with isocyanate sensitivity may still respond to low isocyanate concentrations.

Direct contact with the cast surface without the use of gloves should be avoided until curing has completed. The cast surface should be free of monomer and polymer isocyanate within 30 minutes when proper wetting techniques are used.

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

Acute Toxicity

Name	Route	Species	Value
Overall product	Inhalation-Vapor(4 hr)		No data available; calculated ATE >50 mg/l
Overall product	Ingestion		No data available; calculated ATE >2,000 - =5,000 mg/kg
Oxide glass chemicals	Dermal		LD50 estimated to be > 5,000 mg/kg
Oxide glass chemicals	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
4,4'-Diphenylmethane Diisocyanate-Polypropylene Glycol Polymer	Dermal		LD50 estimated to be > 5,000 mg/kg
4,4'-Diphenylmethane Diisocyanate-Polypropylene Glycol Polymer	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
1,1'-Methylenebis(Isocyanatobenzene)	Dermal	Rabbit	LD50 > 5,000 mg/kg
1,1'-Methylenebis(Isocyanatobenzene)	Inhalation-Dust/Mist (4 hours)	Rat	LC50 0.368 mg/l
1,1'-Methylenebis(Isocyanatobenzene)	Ingestion	Rat	LD50 31,600 mg/kg
2,2'-dimorpholinyldiethyl ether	Dermal	Rabbit	LD50 3,030 mg/kg
2,2'-dimorpholinyldiethyl ether	Ingestion	Rat	LD50 2,020 mg/kg
2,6-Di-Tert-Butyl-P-Cresol	Dermal	Rat	LD50 > 2,000 mg/kg

2,6-Di-Tert-Butyl-P-Cresol	Ingestion	Rat	LD50 > 2,930 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Oxide glass chemicals	Professional judgement	No significant irritation
1,1'-Methylenebis(Isocyanatobenzene)	official classification	Irritant
2,2'-dimorpholinyldiethyl ether	Rabbit	Mild irritant
2,6-Di-Tert-Butyl-P-Cresol	Human and animal	Minimal irritation

Serious Eye Damage/Irritation

Name	Species	Value
Oxide glass chemicals	Professional judgement	No significant irritation
1,1'-Methylenebis(Isocyanatobenzene)	official classification	Severe irritant
2,2'-dimorpholinyldiethyl ether	Rabbit	Severe irritant
2,6-Di-Tert-Butyl-P-Cresol	Rabbit	Mild irritant

Sensitisation:

Skin Sensitisation

Name	Species	Value
1,1'-Methylenebis(Isocyanatobenzene)	official classification	Sensitising
2,2'-dimorpholinyldiethyl ether	Guinea pig	Not classified
2,6-Di-Tert-Butyl-P-Cresol	Human	Not classified

Respiratory Sensitisation

Name	Species	Value
1,1'-Methylenebis(Isocyanatobenzene)	Human	Sensitising

Germ Cell Mutagenicity

Name	Route	Value
Oxide glass chemicals	In Vitro	Some positive data exist, but the data are not sufficient for classification
1,1'-Methylenebis(Isocyanatobenzene)	In Vitro	Some positive data exist, but the data are not sufficient for classification
2,2'-dimorpholinyldiethyl ether	In Vitro	Not mutagenic
2,2'-dimorpholinyldiethyl ether	In vivo	Not mutagenic
2,6-Di-Tert-Butyl-P-Cresol	In Vitro	Not mutagenic
2,6-Di-Tert-Butyl-P-Cresol	In vivo	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Oxide glass chemicals	Inhalation	Multiple animal species	Some positive data exist, but the data are not sufficient for classification
1,1'-Methylenebis(Isocyanatobenzene)	Inhalation	Rat	Some positive data exist, but the data are not sufficient for classification
2,6-Di-Tert-Butyl-P-Cresol	Ingestion	Multiple animal species	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
1,1'-Methylenebis(Isocyanatobenzene)	Inhalation	Not classified for development	Rat	NOAEL 0.004 mg/l	during organogenesis
2,2'-dimorpholinyldiethyl ether	Ingestion	Not classified for female reproduction	Rat	NOAEL 300 mg/kg/day	premating into lactation
2,2'-dimorpholinyldiethyl ether	Ingestion	Not classified for male reproduction	Rat	NOAEL 300 mg/kg/day	28 days
2,2'-dimorpholinyldiethyl ether	Ingestion	Not classified for development	Rat	NOAEL 300 mg/kg/day	premating into lactation
2,6-Di-Tert-Butyl-P-Cresol	Ingestion	Not classified for female reproduction	Rat	NOAEL 500 mg/kg/day	2 generation
2,6-Di-Tert-Butyl-P-Cresol	Ingestion	Not classified for male reproduction	Rat	NOAEL 500 mg/kg/day	2 generation
2,6-Di-Tert-Butyl-P-Cresol	Ingestion	Not classified for development	Rat	NOAEL 100 mg/kg/day	2 generation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
1,1'-Methylenebis(Isocyanatobenzene)	Inhalation	respiratory irritation	May cause respiratory irritation	official classification	NOAEL Not available	
2,2'-dimorpholinyldiethyl ether	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Oxide glass chemicals	Inhalation	respiratory system	Not classified	Human	NOAEL not available	occupational exposure
1,1'-Methylenebis(Isocyanatobenzene)	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0.004 mg/l	13 weeks
2,2'-dimorpholinyldiethyl ether	Ingestion	heart | endocrine system | hematopoietic system | liver | immune system | nervous system | kidney and/or bladder | respiratory system	Not classified	Rat	NOAEL 300 mg/kg/day	28 days
2,6-Di-Tert-Butyl-P-Cresol	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 250 mg/kg/day	28 days
2,6-Di-Tert-Butyl-P-Cresol	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 500 mg/kg/day	2 generation
2,6-Di-Tert-Butyl-P-	Ingestion	blood	Not classified	Rat	LOAEL 420	40 days

Cresol					mg/kg/day	
2,6-Di-Tert-Butyl-P-Cresol	Ingestion	endocrine system	Not classified	Rat	NOAEL 25 mg/kg/day	2 generation
2,6-Di-Tert-Butyl-P-Cresol	Ingestion	heart	Not classified	Mouse	NOAEL 3,480 mg/kg/day	10 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

No product test data available.

Material	CAS Number	Organism	Type	Exposure	Test endpoint	Test result
Oxide glass chemicals	65997-17-3	Green algae	Experimental	72 hours	EC50	>1,000 mg/l
Oxide glass chemicals	65997-17-3	Water flea	Experimental	72 hours	EC50	>1,000 mg/l
Oxide glass chemicals	65997-17-3	Zebra Fish	Experimental	96 hours	LC50	>1,000 mg/l
Oxide glass chemicals	65997-17-3	Green algae	Experimental	72 hours	NOEC	>=1,000 mg/l
4,4'-Diphenylmethane Diisocyanate-Polypropylene Glycol Polymer	9048-57-1	Water flea	Estimated	24 hours	EC50	>100 mg/l
4,4'-Diphenylmethane Diisocyanate-Polypropylene Glycol Polymer	9048-57-1	Zebra Fish	Estimated	24 hours	LC50	>100 mg/l
1,1'-Methylenebis(Isocyanatobenzene)	26447-40-5	Green algae	Analogous Compound	72 hours	EC50	>1,640 mg/l
1,1'-Methylenebis(Isocyanatobenzene)	26447-40-5	Water flea	Analogous Compound	24 hours	EC50	>1,000 mg/l
1,1'-Methylenebis(I	26447-40-5	Zebra Fish	Analogous Compound	96 hours	LC50	>1,000 mg/l

socyanatobenzene)						
1,1'-Methylenebis(Isocyanatobenzene)	26447-40-5	Green algae	Analogous Compound	72 hours	NOEC	1,640 mg/l
1,1'-Methylenebis(Isocyanatobenzene)	26447-40-5	Water flea	Analogous Compound	21 days	NOEC	10 mg/l
1,1'-Methylenebis(Isocyanatobenzene)	26447-40-5	Activated sludge	Analogous Compound	3 hours	EC50	>100 mg/l
1,1'-Methylenebis(Isocyanatobenzene)	26447-40-5	Lettuce	Analogous Compound	17 days	NOEC	1,000 mg/kg (Dry Weight)
1,1'-Methylenebis(Isocyanatobenzene)	26447-40-5	Redworm	Analogous Compound	14 days	LC50	>1,000 mg/kg (Dry Weight)
2,2'-dimorpholinyldiethyl ether	6425-39-4	Green algae	Experimental	72 hours	EC50	>100 mg/l
2,2'-dimorpholinyldiethyl ether	6425-39-4	Water flea	Experimental	48 hours	LC50	>100 mg/l
2,2'-dimorpholinyldiethyl ether	6425-39-4	Zebra Fish	Experimental	96 hours	LC50	>2,150 mg/l
2,2'-dimorpholinyldiethyl ether	6425-39-4	Green algae	Experimental	72 hours	NOEC	100 mg/l
2,6-Di-Tert-Butyl-P-Cresol	128-37-0	Activated sludge	Experimental	3 hours	EC50	>10,000 mg/l
2,6-Di-Tert-Butyl-P-Cresol	128-37-0	Green algae	Experimental	72 hours	EC50	>0.4 mg/l
2,6-Di-Tert-Butyl-P-Cresol	128-37-0	Water flea	Experimental	48 hours	EC50	0.48 mg/l
2,6-Di-Tert-Butyl-P-Cresol	128-37-0	Zebra Fish	Experimental	96 hours	No tox obs at lmt of water sol	>100 mg/l
2,6-Di-Tert-Butyl-P-Cresol	128-37-0	Green algae	Experimental	72 hours	EC10	0.4 mg/l
2,6-Di-Tert-Butyl-P-Cresol	128-37-0	Medaka	Experimental	42 days	NOEC	0.053 mg/l
2,6-Di-Tert-Butyl-P-Cresol	128-37-0	Water flea	Experimental	21 days	NOEC	0.023 mg/l

12.2. Persistence and degradability

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Oxide glass chemicals	65997-17-3	Data not availbl-	N/A	N/A	N/A	N/A

		insufficient				
4,4'-Diphenylmethane Diisocyanate-Polypropylene Glycol Polymer	9048-57-1	Data not availbl-insufficient	N/A	N/A	N/A	N/A
1,1'-Methylenebis(Isocyanatobenzene)	26447-40-5	Analogous Compound Biodegradation	28 days	BOD	0 %BOD/ThOD	OECD 301C - MITI test (I)
1,1'-Methylenebis(Isocyanatobenzene)	26447-40-5	Analogous Compound Aquatic Inherent Biodegrad.	28 days	BOD	0 %BOD/ThOD	OECD 302C - Modified MITI (II)
1,1'-Methylenebis(Isocyanatobenzene)	26447-40-5	Analogous Compound Hydrolysis		Hydrolytic half-life (pH 7)	<2 hours (t 1/2)	
2,2'-dimorpholinyldiethyl ether	6425-39-4	Experimental Biodegradation	28 days	BOD	1 % weight	OECD 301C - MITI test (I)
2,6-Di-Tert-Butyl-P-Cresol	128-37-0	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
Oxide glass chemicals	65997-17-3	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
4,4'-Diphenylmethane Diisocyanate-Polypropylene Glycol Polymer	9048-57-1	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
1,1'-Methylenebis(Isocyanatobenzene)	26447-40-5	Analogous Compound BCF - Fish	28 days	Bioaccumulation factor	200	OECD305-Bioconcentration
1,1'-Methylenebis(Isocyanatobenzene)	26447-40-5	Analogous Compound Bioconcentration		Log Kow	4.51	OECD 117 log Kow HPLC method
2,2'-dimorpholinyldiethyl ether	6425-39-4	Experimental BCF - Fish	56 days	Bioaccumulation factor	<=3.1	OECD305-Bioconcentration
2,6-Di-Tert-Butyl-P-Cresol	128-37-0	Experimental BCF - Fish	56 days	Bioaccumulation factor	1277	OECD305-Bioconcentration

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.

During cleanup or disposal of open, uncured product, gloves providing sufficient protection must be worn. E.g. nitrile gloves with a minimum thickness of 0.127 mm (5 mil, 0.005 inch) have proven to provide effective protection. Additionally the following skin protection may be needed: laboratory coat or long-sleeve protective gauntlets. Dispose of completely cured (or polymerized) material in a permitted industrial waste facility. As a disposal alternative, incinerate uncured product in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. If no other disposal options are available, waste product that has been completely cured or polymerized may be placed in a landfill properly designed for industrial waste. 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 HSR002552

Group standard name	Cosmetic Products 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	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 Carcinogenicity Category 2, Specific target organ toxicity Category 1, Skin corrosion Category 1C, Serious eye damage Category 1, Hazardous to the aquatic environment Category 4 substances)
Secondary containment	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 Carcinogenicity Category 2, Specific target organ toxicity Category 1, Skin corrosion Category 1C, 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 Skin corrosion Category 1C, 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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