



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™ Plus Enhancing Performance Casting Tape (Bright Colors)

Product Identification Numbers

YP-2060-0010-8	YP-2060-0011-6	YP-2060-0012-4	YP-2060-0023-1	YP-2060-0024-9
YP-2060-0025-6	YP-2060-0038-9			

1.2. Recommended use and restrictions on use

Recommended 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 Sensitisation: Category 1

Skin Sensitisation: 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
Glass Yarn	65997-17-3	40 - 70
4,4'-Diphenylmethane diisocyanate-polypropylene glycol polymer	9048-57-1	15 - 40
4,4'-diphenylmethane diisocyanate	26447-40-5	3 - 6
Calcium metasilicate	13983-17-0	1 - 5
Colourant 1	Trade Secret	1 - 5
Colourant 2	Trade Secret	1 - 5
Colourant 3	Trade Secret	1 - 5
2,6-Di-tert-butyl-p-cresol	128-37-0	< 0.5
Tosyl chloride	98-59-9	0.01 - 0.05

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

If exposed, flush eyes with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms develop, 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

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

<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.

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 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 carcinogen
2,6-Di-tert-butyl-p-cresol	128-37-0	New Zealand WES	TWA(8 hours):10 mg/m3	Dermal sensitizer
Calcium metasilicate	13983-17-0	ACGIH	TWA(inhalable fraction):1 mg/m3	A4: Not class. as human carcinogen
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 carcinogen
CONTINUOUS FILAMENT GLASS FIBERS, INHALABLE FRACTION	65997-17-3	ACGIH	TWA(inhalable fraction):5 mg/m3	A4: Not class. as human carcinogen
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.
Glass Yarn	65997-17-3	Manufacturer	TWA(as non-fibrous,	

		determined	respirable)(8 hours):3 mg/m ³ ;TWA(as non-fibrous, inhalable fraction)(8 hours):10 mg/m ³	
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.
Tosyl chloride	98-59-9	AIHA	CEIL:5 mg/m ³	

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

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:

During cleanup or disposal of large amounts of product:

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

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:	Roll of Tape. (Fiberglass knitted tape impregnated with moisture curable polyurethane prepolymer resin)
Colour	Bright Green, Bright Orange, Bright Pink
Odour	Slight Odour
Odour threshold	<i>No data available.</i>
pH	<i>No data available.</i>
Melting point/Freezing point	<i>No data available.</i>
Boiling point/Initial boiling point/Boiling range	<i>No data available.</i>
Flash point	No flash point
Evaporation rate	Negligible
Flammability (solid, gas)	Not classified
Flammable Limits(LEL)	<i>No data available.</i>
Flammable Limits(UEL)	<i>No data available.</i>
Vapor Density and/or Relative Vapor Density	<i>No data available.</i>
Density	1.1 g/ml
Relative density	1.1 [Ref Std: WATER=1]
Water solubility	Nil
Solubility- non-water	<i>Not applicable.</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/Kinematic Viscosity	35,000 - 65,000 mPa-s [@ 23 °C]
Volatile organic compounds (VOC)	<i>No data available.</i>
Percent volatile as Text	Negligible
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 Possibility of hazardous reactions

Hazardous polymerisation will not occur.

10.4 Conditions to avoid

Sparks and/or flames.

10.5 Incompatible materials

Alcohols.

Amines.

Strong bases.

Strong oxidising agents.

Strong oxidising agents.

10.6 Hazardous decomposition products**Substance**

None known.

Condition

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 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	Ingestion		No data available; calculated ATE >2,000 - =5,000

3M™ Scotchcast™ Plus Enhancing Performance Casting Tape (Bright Colors)

			mg/kg
Glass Yarn	Dermal		LD50 estimated to be > 5,000 mg/kg
Glass Yarn	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
4,4'-diphenylmethane diisocyanate	Dermal	Rabbit	LD50 > 5,000 mg/kg
4,4'-diphenylmethane diisocyanate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 0.368 mg/l
4,4'-diphenylmethane diisocyanate	Ingestion	Rat	LD50 31,600 mg/kg
Calcium metasilicate	Dermal		LD50 estimated to be > 5,000 mg/kg
Calcium metasilicate	Ingestion		LD50 estimated to be 2,000 - 5,000 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
Tosyl chloride	Dermal	Rabbit	LD50 estimated to be > 5,000 mg/kg
Tosyl chloride	Ingestion	Rat	LD50 > 5,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Glass Yarn	Professional judgement	No significant irritation
4,4'-diphenylmethane diisocyanate	official classification	Irritant
2,6-Di-tert-butyl-p-cresol	Human and animal	Minimal irritation
Tosyl chloride	Rabbit	Irritant

Serious Eye Damage/Irritation

Name	Species	Value
Glass Yarn	Professional judgement	No significant irritation
4,4'-diphenylmethane diisocyanate	official classification	Severe irritant
2,6-Di-tert-butyl-p-cresol	Rabbit	Mild irritant
Tosyl chloride	Rabbit	Corrosive

Sensitisation:

Skin Sensitisation

Name	Species	Value
4,4'-diphenylmethane diisocyanate	official classification	Sensitising
2,6-Di-tert-butyl-p-cresol	Human	Not classified
Tosyl chloride	Mouse	Sensitising

Respiratory Sensitisation

Name	Species	Value
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4,4'-diphenylmethane diisocyanate	Human	Sensitising

Germ Cell Mutagenicity

Name	Route	Value
Glass Yarn	In Vitro	Some positive data exist, but the data are not sufficient for classification
4,4'-diphenylmethane diisocyanate	In Vitro	Some positive data exist, but the data are not sufficient for classification
Calcium metasilicate	In Vitro	Not mutagenic
2,6-Di-tert-butyl-p-cresol	In Vitro	Not mutagenic
2,6-Di-tert-butyl-p-cresol	In vivo	Not mutagenic
Tosyl chloride	In vivo	Not mutagenic
Tosyl chloride	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Glass Yarn	Inhalation	Multiple animal species	Some positive data exist, but the data are not sufficient for classification
4,4'-diphenylmethane diisocyanate	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
4,4'-diphenylmethane diisocyanate	Inhalation	Not classified for development	Rat	NOAEL 0.004 mg/l	during organogenesis
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
Tosyl chloride	Ingestion	Not classified for female reproduction	Rat	NOAEL 750 mg/kg/day	premating into lactation
Tosyl chloride	Ingestion	Not classified for male reproduction	Rat	NOAEL 750 mg/kg/day	34 days
Tosyl chloride	Ingestion	Not classified for development	Rat	NOAEL 750 mg/kg/day	premating into lactation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
4,4'-diphenylmethane diisocyanate	Inhalation	respiratory irritation	May cause respiratory irritation	official classification	NOAEL Not available	
Tosyl chloride	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
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3M™ Scotchcast™ Plus Enhancing Performance Casting Tape (Bright Colors)

Glass Yarn	Inhalation	respiratory system	Not classified	Human	NOAEL not available	occupational exposure
4,4'-diphenylmethane diisocyanate	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0.004 mg/l	13 weeks
Calcium metasilicate	Inhalation	respiratory system	Not classified	Human	NOAEL Not available	occupational exposure
Calcium metasilicate	Inhalation	pulmonary fibrosis	Not classified	Human and animal	NOAEL Not available	
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-cresol	Ingestion	blood	Not classified	Rat	LOAEL 420 mg/kg/day	40 days
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
Tosyl chloride	Ingestion	gastrointestinal tract	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 750 mg/kg/day	34 days
Tosyl chloride	Ingestion	heart endocrine system hematopoietic system nervous system kidney and/or bladder liver immune system respiratory system	Not classified	Rat	NOAEL 750 mg/kg/day	34 days

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
Glass Yarn	65997-17-3	Green algae	Experimental	72 hours	EC50	>1,000 mg/l
Glass Yarn	65997-17-3	Water flea	Experimental	72 hours	EC50	>1,000 mg/l
Glass Yarn	65997-17-3	Zebra Fish	Experimental	96 hours	LC50	>1,000 mg/l
Glass Yarn	65997-17-3	Green algae	Experimental	72 hours	NOEC	>=1,000 mg/l
4,4'-Diphenylmethane diisocyanate-	9048-57-1	Water flea	Estimated	24 hours	EC50	>100 mg/l

3M™ Scotchcast™ Plus Enhancing Performance Casting Tape (Bright Colors)

polypropylene glycol polymer						
4,4'-Diphenylmethane diisocyanate-polypropylene glycol polymer	9048-57-1	Zebra Fish	Estimated	24 hours	LC50	>100 mg/l
4,4'-diphenylmethane diisocyanate	26447-40-5	Green algae	Analogous Compound	72 hours	EC50	>1,640 mg/l
4,4'-diphenylmethane diisocyanate	26447-40-5	Water flea	Analogous Compound	24 hours	EC50	>1,000 mg/l
4,4'-diphenylmethane diisocyanate	26447-40-5	Zebra Fish	Analogous Compound	96 hours	LC50	>1,000 mg/l
4,4'-diphenylmethane diisocyanate	26447-40-5	Green algae	Analogous Compound	72 hours	NOEC	1,640 mg/l
4,4'-diphenylmethane diisocyanate	26447-40-5	Water flea	Analogous Compound	21 days	NOEC	10 mg/l
4,4'-diphenylmethane diisocyanate	26447-40-5	Activated sludge	Analogous Compound	3 hours	EC50	>100 mg/l
4,4'-diphenylmethane diisocyanate	26447-40-5	Lettuce	Analogous Compound	17 days	NOEC	1,000 mg/kg (Dry Weight)
4,4'-diphenylmethane diisocyanate	26447-40-5	Redworm	Analogous Compound	14 days	LC50	>1,000 mg/kg (Dry Weight)
Calcium metasilicate	13983-17-0	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
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
Tosyl chloride	98-59-9	Activated sludge	Estimated	3 hours	EC10	240 mg/l
Tosyl chloride	98-59-9	Green algae	Experimental	72 hours	EC50	>100 mg/l
Tosyl chloride	98-59-9	Medaka	Experimental	96 hours	LC50	>100 mg/l

3M™ Scotchcast™ Plus Enhancing Performance Casting Tape (Bright Colors)

Tosyl chloride	98-59-9	Water flea	Experimental	48 hours	EC50	>334 mg/l
Tosyl chloride	98-59-9	Green algae	Experimental	72 hours	NOEC	2.6 mg/l

12.2. Persistence and degradability

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Glass Yarn	65997-17-3	Data not availbl- insufficient	N/A	N/A	N/A	N/A
4,4'- Diphenylmetha ne diisocyanate- polypropylene glycol polymer	9048-57-1	Data not availbl- insufficient	N/A	N/A	N/A	N/A
4,4'- diphenylmetha ne diisocyanate	26447-40-5	Analogous Compound Biodegradation	28 days	BOD	0 %BOD/ThO D	OECD 301C - MITI test (I)
4,4'- diphenylmetha ne diisocyanate	26447-40-5	Analogous Compound Aquatic Inherent Biodegrad.	28 days	BOD	0 %BOD/ThO D	OECD 302C - Modified MITI (II)
4,4'- diphenylmetha ne diisocyanate	26447-40-5	Analogous Compound Hydrolysis		Hydrolytic half-life (pH 7)	<2 hours (t 1/2)	
Calcium metasilicate	13983-17-0	Data not availbl- insufficient	N/A	N/A	N/A	N/A
2,6-Di-tert- butyl-p-cresol	128-37-0	Data not availbl- insufficient	N/A	N/A	N/A	N/A
Tosyl chloride	98-59-9	Experimental Biodegradation	28 days	BOD	60 %BOD/ThO D	OECD 301D - Closed bottle test
Tosyl chloride	98-59-9	Experimental Hydrolysis		Hydrolytic half-life	2.2 minutes (t 1/2)	

12.3 : Bioaccumulative potential

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Glass Yarn	65997-17-3	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
4,4'- Diphenylmetha ne diisocyanate- polypropylene glycol polymer	9048-57-1	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
4,4'- diphenylmetha ne diisocyanate	26447-40-5	Analogous Compound BCF - Fish	28 days	Bioaccumulatio n factor	200	OECD305- Bioconcentration
4,4'- diphenylmetha	26447-40-5	Analogous Compound		Log Kow	4.51	OECD 117 log Kow HPLC method

3M™ Scotchcast™ Plus Enhancing Performance Casting Tape (Bright Colors)

ne diisocyanate		Bioconcentration				
Calcium metasilicate	13983-17-0	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
2,6-Di-tert-butyl-p-cresol	128-37-0	Experimental BCF - Fish	56 days	Bioaccumulation factor	1277	OECD305-Bioconcentration
Tosyl chloride	98-59-9	Estimated Bioconcentration		Log Kow	0.93	

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. Incinerate uncured product in a permitted waste incineration facility. 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	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 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	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 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

Revision information:

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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