



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™ Semi-Rigid Plastic Repair PN 34240

Product Identification Numbers

60-4550-5240-1

1.2. Recommended use and restrictions on use

Recommended use

Automotive

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

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:

28-7005-3, 28-7003-8

One or more components of this KIT is classified as a hazardous chemical according to the Model Work Health and Safety Regulations, 2011, in accordance with applicable State and Territory legislation.

TRANSPORT INFORMATION

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

3M™ Semi-Rigid Plasic Repair PN 34240 (Part A)

1.2. Recommended use and restrictions on use

Recommended use

Automotive

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, in accordance with applicable State and Territory legislation.

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

2.1. Classification of the substance or mixture

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

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

H315	Causes skin irritation.
H319	Causes serious eye 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.

Precautionary statements

Prevention:

P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P264	Wash thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P272	Contaminated work clothing should not be allowed out of the workplace.
P280E	Wear protective gloves.
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.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312	Call a POISON CENTRE or doctor/physician if you feel unwell.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P337 + P313	IF eye irritation persists: Get medical advice/attention.
P342 + P311	If experiencing respiratory symptoms: Call a POISON CENTRE or doctor/physician.
P362 + P364	Take off contaminated clothing and wash it before reuse.

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

None known.

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	CAS Nbr	% by Weight
Castor Oil, Polymer With 1,1'-Methylenebis[4-Isocyanatobenzene]	68424-09-9	30 - 60
P,P'-Methylenebis(phenyl isocyanate)	101-68-8	30 - 60
4,4'-Methylenediphenyl diisocyanate, oligomers	25686-28-6	10 - 30
Oxirane, Methyl-, Polymer With Oxirane, Ether With 1,2,3-Propanetriol (3:1), Polymer With 1,1'-Methylenebis[4-Isocyanatobenzene]	59675-67-1	1 - 5
Carbon black	1333-86-4	< 1
Chromium Compound 1	71701-12-7	0.01 - 0.3
Chromium Compound 2	74421-71-9	0.01 - 0.1
Chromium Compound 3	71839-90-2	0.01 - 0.1
Chromium	7440-47-3	< 0.02

SECTION 4: First aid measures**4.1. Description of first aid measures****Inhalation**

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

Skin contact

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

Eye contact

Immediately flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. Get medical attention.

If swallowed

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

4.2. Most important symptoms and effects, both acute and delayed

Irritating to the respiratory tract (coughing, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain). Allergic respiratory reaction (difficulty breathing, wheezing, cough, and tightness of chest). Allergic skin reaction (redness, swelling, blistering, and itching). Target organ effects following prolonged or repeated exposure. See Section 11 for additional details.

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.
Hydrogen cyanide.
Oxides of nitrogen.
Toxic vapour, gas, particulate.

Condition

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

5.3. Special protective actions for fire-fighters

Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

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. 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 in accordance with applicable local/regional/national/international regulations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

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

7.2. Conditions for safe storage including any incompatibilities

Store in a well-ventilated place. Keep container tightly closed to prevent contamination with water or air. If contamination is suspected, do not reseal container. Store away from acids. Store away from strong bases.

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
P,P'-Methylenebis(phenyl isocyanate)	101-68-8	ACGIH	TWA:0.005 ppm	
P,P'-Methylenebis(phenyl isocyanate)	101-68-8	Australia OELs	TWA(8 hours):0.02 mg/m ³ ;STEL(15 minutes):0.07 mg/m ³	
Carbon black	1333-86-4	ACGIH	TWA(inhalable fraction):3 mg/m ³	A3: Confirmed animal carcinogen.
Carbon black	1333-86-4	Australia OELs	TWA(8 hours): 3 mg/m ³	
Free isocyanates	25686-28-6	Australia OELs	TWA(as NCO)(8 hours):0.02 mg/m ³ ;STEL(as NCO)(15 minutes):0.07 mg/m ³	
Free isocyanates	59675-67-1	Australia OELs	TWA(as NCO)(8 hours):0.02 mg/m ³ ;STEL(as NCO)(15 minutes):0.07 mg/m ³	
Free isocyanates	68424-09-9	Australia OELs	TWA(as NCO)(8 hours):0.02 mg/m ³ ;STEL(as NCO)(15 minutes):0.07 mg/m ³	
Chromium (III) oxide	71701-12-7	ACGIH	TWA(as Cr(III), inhalable fraction):0.003 mg/m ³	A4: Not class. as human carcin
Chromium (III) oxide	71701-12-7	Australia OELs	TWA(as Cr)(8 hours):0.5 mg/m ³	
Chromium (III) oxide	71839-90-2	ACGIH	TWA(as Cr(III), inhalable fraction):0.003 mg/m ³	A4: Not class. as human carcin
Chromium (III) oxide	71839-90-2	Australia OELs	TWA(as Cr)(8 hours):0.5 mg/m ³	
Chromium	7440-47-3	ACGIH	TWA(as Cr(0), inhalable fraction):0.5 mg/m ³	
Chromium	7440-47-3	Australia OELs	TWA(8 hours): 0.5 mg/m ³	
Chromium (III) oxide	74421-71-9	ACGIH	TWA(as Cr(III), inhalable fraction):0.003 mg/m ³	A4: Not class. as human carcin
Chromium (III) oxide	74421-71-9	Australia OELs	TWA(as Cr)(8 hours):0.5 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:

Safety glasses with side shields.

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: Polymer laminate

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

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.
Specific Physical Form:	Viscous.
Colour	Black
Odour	Mild Urethane, odour less
Odour threshold	<i>No data available.</i>
pH	<i>Not applicable.</i>
Melting point/Freezing point	<i>No data available.</i>
Boiling point/Initial boiling point/Boiling range	≥ 204.4 °C
Flash point	≥ 143.3 °C [<i>Test Method: Tagliabue closed cup</i>]
Evaporation rate	≤ 1 [<i>Details: Gels with exposure to humidity.</i>]
Flammability	Not applicable.
Flammable Limits(LEL)	<i>Not applicable.</i>
Flammable Limits(UEL)	<i>Not applicable.</i>
Vapour pressure	≤ 0 Pa [<i>@ 20 °C</i>]
Vapour Density and/or Relative Vapour Density	≥ 1 [<i>Ref Std: AIR=1</i>]
Density	1 - 1.2 g/ml

Relative density	1 - 1.2 [Ref Std: WATER=1]
Water solubility	Negligible
Solubility- non-water	No data available.
Partition coefficient: n-octanol/water	No data available.
Autoignition temperature	Not applicable.
Decomposition temperature	No data available.
Kinematic Viscosity	No data available.
Volatile organic compounds (VOC)	0 g/l [Test Method:calculated SCAQMD rule 443.1]
Volatile organic compounds (VOC)	0 % weight [Test Method:calculated per CARB title 2]
Percent volatile	0 % weight
VOC less H2O & exempt solvents	0 g/l [Test Method:calculated SCAQMD rule 443.1]

Particle Characteristics	Not applicable.
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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 will not occur.

10.5 Incompatible materials

Water
Strong acids.
Strong bases.

10.6 Hazardous decomposition products

Substance

None known.

Condition

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.

Eye contact

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

Ingestion

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

Additional Health Effects:

Prolonged or repeated exposure may cause target organ effects:

Prolonged or repeated exposure by inhalation may cause:

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.

Carcinogenicity:

Contains a chemical or chemicals which can cause cancer.

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 ATE >5,000 mg/kg
P,P'-Methylenebis(phenyl isocyanate)	Dermal	Rabbit	LD50 > 5,000 mg/kg
P,P'-Methylenebis(phenyl isocyanate)	Inhalation-Dust/Mist (4 hours)	Rat	LC50 0.368 mg/l
P,P'-Methylenebis(phenyl isocyanate)	Ingestion	Rat	LD50 31,600 mg/kg
4,4'-Methylenediphenyl diisocyanate, oligomers	Dermal	Rabbit	LD50 > 5,000 mg/kg
4,4'-Methylenediphenyl diisocyanate, oligomers	Inhalation-Dust/Mist (4 hours)	Rat	LC50 0.368 mg/l
4,4'-Methylenediphenyl diisocyanate, oligomers	Ingestion	Rat	LD50 31,600 mg/kg
Carbon black	Dermal	Rabbit	LD50 > 3,000 mg/kg
Carbon black	Ingestion	Rat	LD50 > 8,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
P,P'-Methylenebis(phenyl isocyanate)	official classification	Irritant
4,4'-Methylenediphenyl diisocyanate, oligomers	official classification	Irritant
Carbon black	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
P,P'-Methylenebis(phenyl isocyanate)	official classification	Severe irritant
4,4'-Methylenediphenyl diisocyanate, oligomers	official classification	Severe irritant
Carbon black	Rabbit	No significant irritation

Skin Sensitisation

Name	Species	Value
P,P'-Methylenebis(phenyl isocyanate)	Mouse	Sensitising
4,4'-Methylenediphenyl diisocyanate, oligomers	Mouse	Sensitising

Respiratory Sensitisation

Name	Species	Value
P,P'-Methylenebis(phenyl isocyanate)	Human	Sensitising
4,4'-Methylenediphenyl diisocyanate, oligomers	Human	Sensitising

Germ Cell Mutagenicity

Name	Route	Value
P,P'-Methylenebis(phenyl isocyanate)	In Vitro	Some positive data exist, but the data are not sufficient for classification
4,4'-Methylenediphenyl diisocyanate, oligomers	In Vitro	Some positive data exist, but the data are not sufficient for classification
Carbon black	In Vitro	Not mutagenic
Carbon black	In vivo	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
P,P'-Methylenebis(phenyl isocyanate)	Inhalation	Rat	Some positive data exist, but the data are not sufficient for classification
4,4'-Methylenediphenyl diisocyanate, oligomers	Inhalation	Rat	Some positive data exist, but the data are not sufficient for classification
Carbon black	Dermal	Mouse	Not carcinogenic
Carbon black	Ingestion	Mouse	Not carcinogenic
Carbon black	Inhalation	Rat	Carcinogenic.

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

Name	Route	Value	Species	Test result	Exposure Duration
P,P'-Methylenebis(phenyl isocyanate)	Inhalation	Not classified for development	Rat	NOAEL 0.004 mg/l	during organogenesis
4,4'-Methylenediphenyl diisocyanate, oligomers	Inhalation	Not classified for development	Rat	NOAEL 0.004 mg/l	during organogenesis

Target Organ(s)**Specific Target Organ Toxicity - single exposure**

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
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P,P'-Methylenebis(phenyl isocyanate)	Inhalation	respiratory irritation	May cause respiratory irritation	official classification	NOAEL Not available	
4,4'-Methylenediphenyl diisocyanate, oligomers	Inhalation	respiratory irritation	May cause respiratory irritation	official classification	NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
P,P'-Methylenebis(phenyl isocyanate)	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0.004 mg/l	13 weeks
4,4'-Methylenediphenyl diisocyanate, oligomers	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0.004 mg/l	13 weeks
Carbon black	Inhalation	pneumoconiosis	Not classified	Human	NOAEL Not available	occupational exposure

Aspiration Hazard

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

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.

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
Castor Oil, Polymer With 1,1'-Methylenebis[4-Isocyanatobenzene]	68424-09-9	N/A	Data not available or insufficient for classification	N/A	N/A	NA
P,P'-	101-68-8	Activated sludge	Analogous	3 hours	EC50	>100 mg/l

3M™ Semi-Rigid Plasic Repair PN 34240 (Part A)

Methylenebis(phenyl isocyanate)			Compound			
P,P'-Methylenebis(phenyl isocyanate)	101-68-8	Green algae	Analogous Compound	72 hours	EC50	>1,640 mg/l
P,P'-Methylenebis(phenyl isocyanate)	101-68-8	Water flea	Analogous Compound	24 hours	EC50	>1,000 mg/l
P,P'-Methylenebis(phenyl isocyanate)	101-68-8	Zebra Fish	Analogous Compound	96 hours	LC50	>1,000 mg/l
P,P'-Methylenebis(phenyl isocyanate)	101-68-8	Green algae	Analogous Compound	72 hours	NOEC	1,640 mg/l
P,P'-Methylenebis(phenyl isocyanate)	101-68-8	Water flea	Analogous Compound	21 days	NOEC	10 mg/l
4,4'-Methylenediphenyl diisocyanate, oligomers	25686-28-6	Green algae	Estimated	72 hours	EC50	>1,640 mg/l
4,4'-Methylenediphenyl diisocyanate, oligomers	25686-28-6	Water flea	Estimated	24 hours	EC50	>1,000 mg/l
4,4'-Methylenediphenyl diisocyanate, oligomers	25686-28-6	Zebra Fish	Estimated	96 hours	LC50	>1,000 mg/l
4,4'-Methylenediphenyl diisocyanate, oligomers	25686-28-6	Green algae	Estimated	72 hours	NOEL	1,640 mg/l
4,4'-Methylenediphenyl diisocyanate, oligomers	25686-28-6	Water flea	Estimated	21 days	NOEC	10 mg/l
Oxirane, Methyl-, Polymer With Oxirane, Ether With 1,2,3-Propanetriol (3:1), Polymer With 1,1'-Methylenebis[4-Isocyanobenzene]	59675-67-1	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Carbon black	1333-86-4	Green algae	Experimental	72 hours	No tox obs at lmt of water sol	>100 mg/l
Carbon black	1333-86-4	Zebra Fish	Experimental	96 hours	No tox obs at lmt of water sol	>100 mg/l
Carbon black	1333-86-4	Green algae	Experimental	72 hours	No tox obs at lmt of water sol	100 mg/l
Carbon black	1333-86-4	Activated sludge	Experimental	3 hours	NOEC	>800 mg/l
Chromium Compound 1	71701-12-7	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Chromium Compound 2	74421-71-9	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Chromium Compound 3	71839-90-2	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Chromium	7440-47-3	N/A	Data not available or insufficient for classification	N/A	N/A	n/a

12.2. Persistence and degradability

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Castor Oil, Polymer With 1,1'-Methylenebis[4-Isocyanatobenzene]	68424-09-9	Data not available-insufficient	N/A	N/A	N/A	N/A
P,P'-Methylenebis(phenyl isocyanate)	101-68-8	Data not available-insufficient	N/A	N/A	N/A	N/A
4,4'-Methylenediphenyl diisocyanate, oligomers	25686-28-6	Data not available-insufficient	N/A	N/A	N/A	N/A
Oxirane, Methyl-, Polymer With Oxirane, Ether With 1,2,3-Propanetriol (3:1), Polymer With 1,1'-Methylenebis[4-Isocyanatobenzene]	59675-67-1	Data not available-insufficient	N/A	N/A	N/A	N/A
Carbon black	1333-86-4	Data not available-insufficient	N/A	N/A	N/A	N/A
Chromium Compound 1	71701-12-7	Data not available-insufficient	N/A	N/A	N/A	N/A
Chromium Compound 2	74421-71-9	Data not available-insufficient	N/A	N/A	N/A	N/A
Chromium Compound 3	71839-90-2	Data not available-insufficient	N/A	N/A	N/A	N/A
Chromium	7440-47-3	Data not available-insufficient	N/A	N/A	N/A	N/A

12.3 : Bioaccumulative potential

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Castor Oil, Polymer With 1,1'-Methylenebis[4-Isocyanatobenzene]	68424-09-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
P,P'-Methylenebis(phenyl isocyanate)	101-68-8	Analogous Compound BCF - Fish	28 days	Bioaccumulation factor	200	OECD305-Bioconcentration
4,4'-Methylenediphenyl diisocyanate, oligomers	25686-28-6	Estimated BCF - Fish	28 days	Bioaccumulation factor	200	OECD305-Bioconcentration
Oxirane, Methyl-, Polymer With Oxirane, Ether With 1,2,3-Propanetriol (3:1), Polymer With 1,1'-Methylenebis[4-Isocyanatobenzene]	59675-67-1	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
Chromium Compound 1	71701-12-7	Data not available or insufficient for	N/A	N/A	N/A	N/A

		classification				
Chromium Compound 2	74421-71-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Chromium Compound 3	71839-90-2	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Chromium	7440-47-3	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.

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.

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

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:

All components of this product are listed on or exempt from the Australian Inventory of Industrial Chemicals (AIIC). Conditions may apply prior to introduction for direct importers of this product, Please contact 3M Australia on 136 136 for further details.

Poison Schedule: This product is intended for Industrial or Professional Use only and therefore is not packaged and labelled in accordance with the requirements of the Standard for the Uniform Scheduling of Medicines and Poisons.

SECTION 16: Other information

Revision information:

Complete document review.

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™ Semi-Rigid Plastic Repair PN 34240 - Part B

1.2. Recommended use and restrictions on use

Recommended use

Automotive

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, in accordance with applicable State and Territory legislation.

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

2.1. Classification of the substance or mixture

Skin Corrosion/Irritation: Category 2.
Serious Eye Damage/Irritation: Category 2.
Skin Sensitizer: 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

Warning

Symbols

Exclamation mark |

Pictograms



Hazard statements

H315 Causes skin irritation.
 H319 Causes serious eye irritation.
 H317 May cause an allergic skin reaction.

Precautionary statements

Prevention:

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
 P264 Wash thoroughly after handling.
 P272 Contaminated work clothing should not be allowed out of the workplace.
 P280E Wear protective gloves.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
 P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.
 P337 + P313 IF eye irritation persists: Get medical advice/attention.
 P362 + P364 Take off contaminated clothing and wash it before reuse.

Disposal:

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

2.3. Other assigned/identified product hazards

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

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
Polyether Polyol	9082-00-2	40 - 70
Propoxylated Glycerol	25791-96-2	10 - 30
Tetrakis(2-Hydroxypropyl)Ethylenediamine	102-60-3	10 - 30
M-Xylene-Alpha,Alpha'-Diamine	1477-55-0	< 3
2,6-Di-tert-butyl-p-cresol	128-37-0	< 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

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

Allergic skin reaction (redness, swelling, blistering, and itching).

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.
Oxides of nitrogen.	During combustion.

5.3. Special protective actions for fire-fighters

Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

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

6.2. Environmental precautions

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

6.3. Methods and material for containment and cleaning up

Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible.

Place in a closed container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorised person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and Safety Data Sheet. Seal the container. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid breathing dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Avoid contact with oxidising agents (eg. chlorine, chromic acid etc.)

7.2. Conditions for safe storage including any incompatibilities

Store away from acids. Store away from oxidising agents.

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 vapour):2 mg/m3	A4: Not class. as human carcin
2,6-Di-tert-butyl-p-cresol	128-37-0	Australia OELs	TWA(8 hours):10 mg/m3	
M-Xylene-Alpha,Alpha'-Diamine	1477-55-0	ACGIH	CEIL:0.018 ppm	Danger of cutaneous absorption
M-Xylene-Alpha,Alpha'-Diamine	1477-55-0	Australia OELs	Peak limit:0.1 mg/m3	SKIN

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:

Safety glasses with side shields.

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.

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

Neoprene.

Natural rubber.

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

Neoprene apron.

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.
Specific Physical Form:	Viscous.
Colour	Colourless
Odour	Slight Ammoniacal
Odour threshold	<i>No data available.</i>
pH	<i>Not applicable.</i>
Melting point/Freezing point	<i>No data available.</i>
Boiling point/Initial boiling point/Boiling range	≥ 210 °C
Flash point	≥ 143.3 °C [<i>Test Method: Tagliabue closed cup</i>]
Evaporation rate	≤ 1 [<i>Ref Std: WATER=1</i>]
Flammability	Not applicable.
Flammable Limits(LEL)	<i>Not applicable.</i>
Flammable Limits(UEL)	<i>Not applicable.</i>
Vapour pressure	<i>Not applicable.</i>
Vapour Density and/or Relative Vapour Density	≥ 1 [<i>Ref Std: AIR=1</i>]
Density	1 - 1.1 g/ml
Relative density	1 - 1.1 [<i>Ref Std: WATER=1</i>]
Water solubility	Negligible
Solubility- non-water	<i>No data available.</i>

Partition coefficient: n-octanol/water	No data available.
Autoignition temperature	Not applicable.
Decomposition temperature	No data available.
Kinematic Viscosity	1,455 mm ² /sec
Volatile organic compounds (VOC)	0 g/l [Test Method:calculated SCAQMD rule 443.1]
Volatile organic compounds (VOC)	0 % weight [Test Method:calculated per CARB title 2]
Percent volatile	0.49 % weight
VOC less H2O & exempt solvents	0 g/l [Test Method:calculated SCAQMD rule 443.1]

Particle Characteristics	Not applicable.
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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 will not occur.

10.5 Incompatible materials

Strong acids.

Strong oxidising agents.

10.6 Hazardous decomposition products

Substance

None known.

Condition

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labelling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1 Information on Toxicological effects

Signs and Symptoms of Exposure

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

Inhalation

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

Skin contact

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

Eye contact

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

Ingestion

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

Additional information:

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

Toxicological Data

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

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE >5,000 mg/kg
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
Polyether Polyol	Dermal	similar compounds	LD50 > 2,000 mg/kg
Polyether Polyol	Inhalation-Dust/Mist (4 hours)	similar compounds	LC50 > 3.2 mg/l
Polyether Polyol	Ingestion	similar compounds	LD50 > 5,000 mg/kg
Propoxylated Glycerol	Dermal	Rat	LD50 > 2,000 mg/kg
Propoxylated Glycerol	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 50 mg/l
Propoxylated Glycerol	Ingestion	Rat	LD50 4,600 mg/kg
Tetrakis(2-Hydroxypropyl)Ethylenediamine	Dermal	Rat	LD50 > 2,000 mg/kg
Tetrakis(2-Hydroxypropyl)Ethylenediamine	Ingestion	Rat	LD50 2,890 mg/kg
M-Xylene-Alpha,Alpha'-Diamine	Dermal	Rabbit	LD50 > 2,000 mg/kg
M-Xylene-Alpha,Alpha'-Diamine	Inhalation-Dust/Mist (4 hours)	Rat	LC50 1.2 mg/l
M-Xylene-Alpha,Alpha'-Diamine	Ingestion	Rat	LD50 980 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
Polyether Polyol	similar compounds	Minimal irritation
Propoxylated Glycerol	Rabbit	No significant irritation
Tetrakis(2-Hydroxypropyl)Ethylenediamine	Rabbit	No significant irritation
M-Xylene-Alpha,Alpha'-Diamine	Rat	Corrosive
2,6-Di-tert-butyl-p-cresol	Human and animal	Minimal irritation

Serious Eye Damage/Irritation

Name	Species	Value
Polyether Polyol	similar compounds	Mild irritant
Propoxylated Glycerol	Rabbit	Mild irritant
Tetrakis(2-Hydroxypropyl)Ethylenediamine	Rabbit	Severe irritant
M-Xylene-Alpha,Alpha'-Diamine	Rabbit	Corrosive
2,6-Di-tert-butyl-p-cresol	Rabbit	Mild irritant

Skin Sensitisation

Name	Species	Value
Polyether Polyol	similar compounds	Not classified
Tetrakis(2-Hydroxypropyl)Ethylendiamine	Guinea pig	Not classified
M-Xylene-Alpha,Alpha'-Diamine	Guinea pig	Sensitising
2,6-Di-tert-butyl-p-cresol	Human	Not classified

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
Polyether Polyol	In Vitro	Not mutagenic
Tetrakis(2-Hydroxypropyl)Ethylendiamine	In Vitro	Not mutagenic
M-Xylene-Alpha,Alpha'-Diamine	In Vitro	Not mutagenic
M-Xylene-Alpha,Alpha'-Diamine	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
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
Tetrakis(2-Hydroxypropyl)Ethyl enediamine	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	pre mating into lactation
Tetrakis(2-Hydroxypropyl)Ethyl enediamine	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	30 days
Tetrakis(2-Hydroxypropyl)Ethyl enediamine	Ingestion	Not classified for development	Rat	NOAEL 1,000 mg/kg/day	pre mating into lactation
M-Xylene-Alpha,Alpha'-Diamine	Ingestion	Not classified for female reproduction	Rat	NOAEL 450 mg/kg/day	1 generation
M-Xylene-Alpha,Alpha'-Diamine	Ingestion	Not classified for male reproduction	Rat	NOAEL 450 mg/kg	1 generation
M-Xylene-Alpha,Alpha'-Diamine	Ingestion	Not classified for development	Rat	NOAEL 450 mg/kg/day	1 generation
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
Tetrakis(2-Hydroxypropyl)Ethylenediamine	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Positive	
M-Xylene-Alpha,Alpha'-Diamine	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Not available	NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Tetrakis(2-Hydroxypropyl)Ethylenediamine	Ingestion	nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 300 mg/kg/day	30 days
Tetrakis(2-Hydroxypropyl)Ethylenediamine	Ingestion	heart skin endocrine system gastrointestinal tract bone, teeth, nails, and/or hair hematopoietic system liver immune system muscles eyes kidney and/or bladder respiratory system vascular system	Not classified	Rat	NOAEL 1,000 mg/kg/day	30 days
M-Xylene-Alpha,Alpha'-Diamine	Ingestion	endocrine system blood bone marrow	Not classified	Rat	NOAEL 600 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-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

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**Acute aquatic hazard:**

GHS Acute 3: Harmful to aquatic life.

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
Polyether Polyol	9082-00-2	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Propoxylated Glycerol	25791-96-2	Golden Orfe	Experimental	96 hours	LC50	>1,000 mg/l
Propoxylated Glycerol	25791-96-2	Green algae	Experimental	72 hours	ErC50	>100 mg/l
Propoxylated Glycerol	25791-96-2	Water flea	Experimental	48 hours	EC50	>100 mg/l
Propoxylated Glycerol	25791-96-2	Green algae	Experimental	72 hours	NOEC	>100 mg/l
Tetrakis(2-Hydroxypropyl)Ethylendiamine	102-60-3	Green algae	Analogous Compound	72 hours	ErC50	>100 mg/l
Tetrakis(2-Hydroxypropyl)Ethylendiamine	102-60-3	Water flea	Analogous Compound	48 hours	EC50	>500 mg/l
Tetrakis(2-Hydroxypropyl)Ethylendiamine	102-60-3	Activated sludge	Experimental	30 minutes	EC50	>1,000 mg/l
Tetrakis(2-Hydroxypropyl)Ethylendiamine	102-60-3	Fathead minnow	Experimental	96 hours	LC50	>1,000 mg/l
Tetrakis(2-Hydroxypropyl)Ethylendiamine	102-60-3	Green algae	Analogous Compound	72 hours	ErC10	16.1 mg/l
M-Xylene-Alpha,Alpha'-Diamine	1477-55-0	Activated sludge	Experimental	30 minutes	EC50	>1,000 mg/l
M-Xylene-Alpha,Alpha'-Diamine	1477-55-0	Bacteria	Experimental	16 hours	EC10	24 mg/l
M-Xylene-Alpha,Alpha'-Diamine	1477-55-0	Green algae	Experimental	72 hours	ErC50	28 mg/l
M-Xylene-Alpha,Alpha'-Diamine	1477-55-0	Medaka	Experimental	96 hours	LC50	87.6 mg/l
M-Xylene-	1477-55-0	Water flea	Experimental	48 hours	EC50	15.2 mg/l

Alpha,Alpha'-Diamine						
M-Xylene-Alpha,Alpha'-Diamine	1477-55-0	Green algae	Experimental	72 hours	NOEC	9.8 mg/l
M-Xylene-Alpha,Alpha'-Diamine	1477-55-0	Water flea	Experimental	21 days	NOEC	4.7 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
Polyether Polyol	9082-00-2	Modeled Biodegradation	28 days	BOD	20 %BOD/ThOD	Catalogic™
Propoxylated Glycerol	25791-96-2	Experimental Biodegradation	28 days	CO2 evolution	38 %CO2 evolution/THCO2 evolution	OECD 301B - Modified sturm or CO2
Tetrakis(2-Hydroxypropyl)Eth ylenediamine	102-60-3	Experimental Biodegradation	28 days	BOD	1 %BOD/ThOD	OECD 301C - MITI test (I)
M-Xylene-Alpha,Alpha'-Diamine	1477-55-0	Experimental Biodegradation	28 days	CO2 evolution	49 %CO2 evolution/THCO2 evolution	OECD 301B - Modified sturm or CO2
M-Xylene-Alpha,Alpha'-Diamine	1477-55-0	Experimental Aquatic Inherent Biodegrad.	28 days	BOD	22 %BOD/ThOD	OECD 302C - Modified MITI (II)
2,6-Di-tert-butyl-p-cresol	128-37-0	Data not available-insufficient	N/A	N/A	N/A	N/A

12.3 : Bioaccumulative potential

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Polyether Polyol	9082-00-2	Modeled Bioconcentration		Bioaccumulation factor	2	Catalogic™
Polyether Polyol	9082-00-2	Modeled Bioconcentration		Log Kow	-2.6	Episuite™
Propoxylated Glycerol	25791-96-2	Experimental BCF - Fish	42 days	Bioaccumulation factor	≤7	
Tetrakis(2-Hydroxypropyl)Eth ylenediamine	102-60-3	Experimental Bioconcentration		Log Kow	0.27	OECD 107 log Kow shke flask mtd
M-Xylene-Alpha,Alpha'-Diamine	1477-55-0	Experimental BCF - Fish	42 days	Bioaccumulation factor	<2.7	OECD305-Bioconcentration
M-Xylene-Alpha,Alpha'-Diamine	1477-55-0	Extrapolated Bioconcentration		Log Kow	0.18	OECD 107 log Kow shke flask mtd

2,6-Di-tert-butyl-p-cresol	128-37-0	Experimental BCF - Fish	56 days	Bioaccumulation factor	1277	OECD305-Bioconcentration
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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.

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.

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

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:**

All components of this product are listed on or exempt from the Australian Inventory of Industrial Chemicals (AIIC). Conditions may apply prior to introduction for direct importers of this product, Please contact 3M Australia on 136 136 for further details.

Poison Schedule: This product is intended for Industrial or Professional Use only and therefore is not packaged and labelled in accordance with the requirements of the Standard for the Uniform Scheduling of Medicines and Poisons.

SECTION 16: Other information

Revision information:

Complete document review.

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