

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[™] Impregum[™]Penta[™] Soft Quick Step Medium Body Intro Kit (P31771)

Product Identification Numbers 70-2011-3283-7

1.2. Recommended use and restrictions on use

Recommended use Dental Product, Impression Material

Restrictions on use

For use only by dental professionals in approved indications.

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:

19-2468-7, 19-2469-5, 35-4551-4

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

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

UN No.: UN1133 Proper shipping name: ADHESIVES Class/Division: 3 Packing Group: II Marine Pollutant: Not applicable.

Hazchem Code: -3YE IERG: 14

Australian Dangerous Goods Code (ADG) - Road/Rail Transport

Special Instructions: Dangerous Goods in such small quantities that are Excepted Quantities for IMO and IATA will usually be exempt for road or rail transport in Australia.

International Air Transport Association (IATA)- Air Transport Special Instructions: Dangerous goods in Excepted Quantities, Class 3

International Maritime Dangerous Goods Code (IMDG)- Marine Transport

Special Instructions: Forbidden due to internal policy

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[™] Polyether Adhesive (30600) - New Formulation

Product Identification Numbers 70-2011-4439-4

1.2. Recommended use and restrictions on use

Recommended use Dental Product, Tray Adhesive

Restrictions on use For use by dental professionals 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

Flammable Liquid: Category 2. 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

Flame |Exclamation mark |



Hazard statements	
H225	Highly flammable liquid and vapour.
H336	May cause drowsiness or dizziness.

Precautionary statements

Prevention:	
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P240	Ground and bond container and receiving equipment.
P241	Use explosion-proof electrical, ventilating and lighting equipment.
P242	Use non-sparking tools.
P243	Take action to prevent static discharges.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P271	Use only outdoors or in a well-ventilated area.
Response:	
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312	Call a POISON CENTRE or doctor/physician if you feel unwell.
P370 + P378	In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.
Storage:	
P403 + P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
Disposal:	
P501	Dispose of contents/container in accordance with applicable
	local/regional/national/international regulations.
2.2. Other agains ad/identifie	d wux du sé hannada

2.3. Other assigned/identified product hazards None known.

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
ETHYL ACETATE	141-78-6	40 - 70
Dimethylsiloxane, hydroxy-terminated, reaction products with	68440-70-0	40 - 60
chlorotrimethylsilane, hydrochloric acid,		
propan-2-ol and sodium silicate		

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. Do not induce vomiting. Get immediate medical attention.

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

Central nervous system depression (headache, dizziness, drowsiness, incoordination, nausea, slurred speech, giddiness, and unconsciousness).

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 flammable liquids such as dry chemical or carbon dioxide to extinguish.

5.2. Special hazards arising from the substance or mixture

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

5.3. Special protective actions for fire-fighters

Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture. 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.

Hazchem Code: •3YE

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate area. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. 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. WARNING ! A motor could be an ignition source and could cause flammable gases or vapours in the spill area to burn or explode. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Contain spill. Collect as much of the spilled material as possible using non-sparking tools. Place in a metal 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 prolonged or repeated skin contact. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Take precautionary measures against static discharge. Avoid breathing dust/fume/gas/mist/vapours/spray. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid release to the environment. Avoid contact with oxidising agents (eg. chlorine, chromic acid etc.) Do not get in eyes.

7.2. Conditions for safe storage including any incompatibilities

Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store away from heat. 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
ETHYL ACETATE	141-78-6	ACGIH	TWA:400 ppm	
ETHYL ACETATE	141-78-6	Australia OELs	TWA(8 hours):720 mg/m3(200 ppm);STEL(15 minutes):1440 mg/m3(400 ppm)	

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 in a well-ventilated area.

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.

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

See Section 7.1 for additional information on skin protection.

Respiratory protection

None required.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

The individual of basic physical and chemical property		
Physical state	Liquid.	
Specific Physical Form:	Viscous.	
Colour	Red	
Odour	Characteristic Organic solvent	
Odour threshold	No data available.	
рН	No data available.	
Melting point/Freezing point	No data available.	
Boiling point/Initial boiling point/Boiling range	76.1 °C	
Flash point	-3.9 °C [Test Method:Closed Cup]	
Evaporation rate	No data available.	
Flammability	Flammable Liquid: Category 2.	
Flammable Limits(LEL)	1.2 %	
Flammable Limits(UEL)	11.5 %	
Vapour pressure	17,465.2 Pa	
Vapor Density and/or Relative Vapor Density	> 1 [<i>Ref Std</i> :AIR=1]	
Density	Approximately 0.9 g/cm3	
Relative density	> 0.9 [<i>Ref Std</i> :WATER=1]	
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.	
Kinematic Viscosity	278 mm ² /sec	
Volatile organic compounds (VOC)	No data available.	
Percent volatile	No data available.	
VOC less H2O & exempt solvents	No data available.	
Molecular weight	No data available.	

Particle Characteristics

Not applicable.

SECTION 10: Stability and reactivity

10.1 Reactivity

This material is considered to be non reactive under normal use conditions

10.2 Chemical stability Stable.

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

10.4. Possibility of hazardous reactions

Hazardous polymerisation will not occur.

10.5 Incompatible materials

None known.

10.6 Hazardous decomposition products

<u>Substance</u> Carbon monoxide. Carbon dioxide. <u>Condition</u> Oxidation, heat or reaction Oxidation, heat or reaction

SECTION 11: Toxicological information

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

11.1 Information on Toxicological effects

Signs and Symptoms of Exposure

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

Inhalation

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

Skin contact

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

Eye contact

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

Ingestion

Gastrointestinal irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhoea. May cause additional health effects (see below).

Additional Health Effects:

Single exposure may cause target organ effects:

Central nervous system (CNS) depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

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
ETHYL ACETATE	Dermal	Rabbit	LD50 > 18,000 mg/kg
ETHYL ACETATE	Inhalation-Vapour (4	Rat	LC50 70.5 mg/l
	hours)		
ETHYL ACETATE	Ingestion	Rat	LD50 5,620 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
ETHYL ACETATE	Rabbit	Minimal irritation

Serious Eye Damage/Irritation

Name	Species	Value
ETHYL ACETATE	Rabbit	Mild irritant

Skin Sensitisation

Name	Species	Value
ETHYL ACETATE	Guinea pig	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
ETHYL ACETATE	In Vitro	Not mutagenic
ETHYL ACETATE	In vivo	Not mutagenic

Carcinogenicity

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

Reproductive Toxicity

Reproductive and/or Developmental Effects

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

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
ETHYL ACETATE	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
ETHYL ACETATE	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for	Human	NOAEL Not available	

			classification			
ETHYL	Ingestion	central nervous	May cause	Human	NOAEL Not	
ACETATE		system	drowsiness or		available	
		depression	dizziness			

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
ETHYL ACETATE	Inhalation	endocrine system liver nervous system	Not classified	Rat	NOAEL 0.043 mg/l	90 days
ETHYL ACETATE	Inhalation	hematopoietic system	Not classified	Rabbit	LOAEL 16 mg/l	40 days
ETHYL ACETATE	Ingestion	hematopoietic system liver kidney and/or bladder	Not classified	Rat	NOAEL 3,600 mg/kg/day	90 days

Aspiration Hazard

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

Exposure Levels

Refer Section 8.1 Control Parameters of this Safety Data Sheet.

Interactive Effects

Not Determined

SECTION 12: Ecological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. Additional information leading to material classification in Section 2 is available upon request. In addition, environmental fate and effects data on ingredients may not be reflected in this section because an ingredient is present below the threshold for labelling, an ingredient is not expected to be available for exposure, or the data is considered not relevant to the material as a whole.

12.1. Toxicity

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	Туре	Exposure	Test endpoint	Test result
ETHYL ACETATE	141-78-6	Bacteria	Experimental	18 hours	EC10	2,900 mg/l
ETHYL ACETATE	141-78-6	Fish	Experimental	96 hours	LC50	212.5 mg/l
ETHYL ACETATE	141-78-6	Invertebrate	Experimental	48 hours	EC50	165 mg/l
ETHYL ACETATE	141-78-6	Green algae	Experimental	72 hours	NOEC	>100 mg/l
ETHYL ACETATE	141-78-6	Water flea	Experimental	21 days	NOEC	2.4 mg/l
Dimethylsiloxane, hydroxy-	68440-70-0	N/A	Data not available or insufficient for	N/A	N/A	N/A

terminated,		classification		
reaction products				
with				
chlorotrimethylsila				
ne, hydrochloric				
acid, propan-2-ol				
and sodium silicate				

12.2. Persistence and degradability

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
ETHYL	141-78-6	Experimental	14 days	BOD	94 %BOD/ThOD	OECD 301C - MITI test (I)
ACETATE		Biodegradation				
ETHYL	141-78-6	Experimental		Photolytic half-life	20.0 days (t 1/2)	
ACETATE		Photolysis		(in air)		
Dimethylsiloxane, hydroxy- terminated,	68440-70-0	Data not available- insufficient	N/A	N/A	N/A	N/A
reaction products						
with						
chlorotrimethylsila						
ne, hydrochloric						
acid, propan-2-ol and sodium silicate						

12.3 : Bioaccumulative potential

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
ETHYL ACETATE	141-78-6	Experimental Bioconcentration		Log Kow	0.68	
Dimethylsiloxane, hydroxy- terminated, reaction products with chlorotrimethylsila ne, hydrochloric acid, propan-2-ol and sodium silicate	68440-70-0	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

12.4. Mobility in soil

Please contact manufacturer for more details

12.5 Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Disposal methods

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

Incinerate in a permitted waste incineration facility.

SECTION 14: Transport Information

Australian Dangerous Goods Code (ADG) - Road/Rail Transport UN No.: UN1133

Proper shipping name: ADHESIVES Class/Division: 3 Sub Risk: Not applicable. Packing Group: II Special Instructions: Dangerous Goods in such small quantities that are Excepted Quantities for IMO and IATA will usually be exempt for road or rail transport in Australia. Hazchem Code: •3YE IERG: 14

International Air Transport Association (IATA) - Air Transport UN No.: UN1133 Proper shipping name: ADHESIVES Class/Division: 3 Sub Risk: Not applicable. Packing Group: II Special Instructions: Dangerous goods in Excepted Quantities, Class 3

International Maritime Dangerous Goods Code (IMDG)- Marine Transport UN No.: UN1133 Proper shipping name: ADHESIVES Class/Division: 3 Sub Risk: Not applicable. Packing Group: II Marine Pollutant: Not applicable. Special Instructions: Forbidden by this mode of transport

SECTION 15: Regulatory information

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

Australian Inventory Status:

This product is regulated by the Therapeutics Goods Administration and is exempt from compliance with the Industrial Chemicals (Notification and Assessment) Act 1989 as amended.

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.

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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[™] Impregum[™] Penta[™] Soft Quick Step Medium Body Base

1.2. Recommended use and restrictions on use

Recommended use

Dental Product, Impression Material

Restrictions on use

For use by dental professionals only.

1.3. Supplier's details

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

Serious Eye Damage/Irritation: Category 2. Skin Sensitizer: Category 1A. Reproductive Toxicity: Category 1.

2.2. Label elements

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

Signal word

Danger

Symbols

Exclamation mark |Health Hazard |

Pictograms



H

Hazard statements	
H319	Causes serious eye irritation.
H317	May cause an allergic skin reaction.
H360	May damage fertility or the unborn child.

Precautionary statements

Prevention: P201 P202 P264 P272	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.			
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.			
P308 + P313	IF exposed or concerned: Get medical advice/attention.			
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.			
Storage:				
P405	Store locked up.			
Disposal:				
P501	Dispose of contents/container in accordance with applicable local/regional/national/international regulations.			

2.3. Other assigned/identified product hazards

None known.

2.4. Other hazards which do not result in classification

Causes mild skin irritation.

Very toxic to aquatic life with long lasting effects.

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	CAS Nbr	% by Weight

Furan, tetrahydro-, polymer with oxirane,	110531-92-5	50 - 60	
bis[[3-(1-aziridinyl)butyl]carbamate]			
Glycerides, C14-18	67701-27-3	10 - 20	
Flux calcined diatomaceous earth	68855-54-9	1 - 20	
(cristobalite 1 - <10%)			
Benzene, bis(phenylmethyl)-, ar-methyl	53585-53-8	5 - 16	
deriv.			
Sulphonamide	80-39-7	1 - 5	
1-Dodecylimidazole	4303-67-7	< 1	

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation

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

Skin contact

Immediately 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

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>	
Carbon monoxide.	
Carbon dioxide.	
Irritant vapours or gases.	

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.

Condition

During combustion. During combustion. During combustion.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Page: 3 of 13

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 closed container approved for transportation by appropriate authorities. Clean up residue. 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

Do not handle until all safety precautions have been read and understood. 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.) Do not get in eyes. Use personal protective equipment (eg. gloves, respirators...) as required. A no-touch technique is recommended. If skin contact occurs, wash skin with soap and water. If product contacts glove, remove and discard glove, wash hands immediately with soap and water and then re-glove.

7.2. Conditions for safe storage including any incompatibilities

Store away from heat. Store away from acids. Store away from strong bases. 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
Silicon dioxide	68855-54-9	Australia OELs	TWA(respirable fraction)(8	
			hours):2 mg/m3	

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

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

CMRG : Chemical Manufacturer's Recommended Guidelines

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

Sen: Sensitiser

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

8.2. Exposure controls

8.2.1. Engineering controls

Use in a well-ventilated area.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Select and use eve/face protection to prevent contact based on the results of an exposure assessment. The following eve/face protection(s) are recommended: Safety glasses with side shields.

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

See Section 7.1 for additional information on skin protection.

Respiratory protection

None required.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Solid.
Specific Physical Form:	Paste
τ ν	
Colour	Blue
Odour	Characteristic Odour
Odour threshold	No data available.
рН	No data available.
Melting point/Freezing point	Not applicable.
Boiling point/Initial boiling point/Boiling range	Not applicable.
Flash point	Flash point > 93 °C (200 °F)
Evaporation rate	Not applicable.
Flammability (solid, gas)	Not classified
Flammable Limits(LEL)	Not applicable.
Flammable Limits(UEL)	Not applicable.
Vapour pressure	Not applicable.
Vapor Density and/or Relative Vapor Density	Not applicable.
Density	1 g/cm3 - 1.2 g/cm3
Relative density	> 1 [<i>Ref Std</i> :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.
Viscosity/Kinematic Viscosity	No data available.
Volatile organic compounds (VOC)	Not applicable.
Percent volatile	Not applicable.
VOC less H2O & exempt solvents	Not applicable.

Nanoparticles

This material does not contain nanoparticles.

SECTION 10: Stability and reactivity

10.1 Reactivity

This material is considered to be non reactive under normal use conditions

10.2 Chemical stability

Stable.

10.3. Conditions to avoid

Heat.

10.4. Possibility of hazardous reactions

Hazardous polymerisation will not occur.

10.5 Incompatible materials Strong acids. Strong bases. 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

This product may have a characteristic odour; however, no adverse health effects are anticipated.

Skin contact

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

Eye contact

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

Ingestion

Gastrointestinal irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhoea. May cause additional health effects (see below).

Additional Health Effects:

Reproductive/Developmental Toxicity:

Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

Carcinogenicity:

Exposures needed to cause the following health effect(s) are not expected during normal, intended use: Contains a chemical or chemicals which can cause cancer.

Toxicological Data

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

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE >5,000 mg/kg
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
Furan, tetrahydro-, polymer with oxirane, bis[[3-(1- aziridinyl)butyl]carbamate]	Dermal	Professional judgement	LD50 Not applicable
Furan, tetrahydro-, polymer with oxirane, bis[[3-(1- aziridinyl)butyl]carbamate]	Ingestion	Rat	LD50 > 2,000 mg/kg
Glycerides, C14-18	Dermal	Rabbit	LD50 > 2,000 mg/kg
Glycerides, C14-18	Ingestion	Rat	LD50 > 2,000 mg/kg
Benzene, bis(phenylmethyl)-, ar- methyl deriv.	Dermal	Rat	LD50 > 2,000 mg/kg
Benzene, bis(phenylmethyl)-, ar- methyl deriv.	Ingestion	Rat	LD50 > 10,360 mg/kg
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 2.7 mg/l
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	Ingestion	Rat	LD50 > 2,000 mg/kg
Sulphonamide	Dermal	Rabbit	LD50 > 5,000 mg/kg
Sulphonamide	Ingestion	similar compounds	LD50 estimated to be 300 - 2,000 mg/kg
1-Dodecylimidazole	Ingestion	Rat	LD50 641 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Furan, tetrahydro-, polymer with oxirane, bis[[3-(1-aziridinyl)butyl]carbamate]	Rabbit	No significant irritation
Benzene, bis(phenylmethyl)-, ar-methyl deriv.	Rabbit	Mild irritant
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	In vitro data	No significant irritation
1-Dodecylimidazole	Rabbit	Mild irritant

Serious Eye Damage/Irritation

Name	Species	Value
Furan, tetrahydro-, polymer with oxirane, bis[[3-(1-aziridinyl)butyl]carbamate]	Rabbit	Moderate irritant
Benzene, bis(phenylmethyl)-, ar-methyl deriv.	Rabbit	No significant irritation
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	Rabbit	Mild irritant
1-Dodecylimidazole	In vitro data	Severe irritant

Skin Sensitisation

Name	Species	Value
Furan, tetrahydro-, polymer with oxirane, bis[[3-(1-aziridinyl)butyl]carbamate]	Guinea pig	Not classified
Benzene, bis(phenylmethyl)-, ar-methyl deriv.	Guinea pig	Not classified
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	Mouse	Not classified
1-Dodecylimidazole	Mouse	Sensitising

Respiratory Sensitisation

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

Germ Cell Mutagenicity

Name	Route	Value
Furan, tetrahydro-, polymer with oxirane, bis[[3-(1- aziridinyl)butyl]carbamate]	In Vitro	Not mutagenic
Benzene, bis(phenylmethyl)-, ar-methyl deriv.	In Vitro	Not mutagenic
Benzene, bis(phenylmethyl)-, ar-methyl deriv.	In vivo	Not mutagenic
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	In Vitro	Some positive data exist, but the data are not sufficient for classification
1-Dodecylimidazole	In Vitro	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Flux calcined diatomaceous earth	Inhalation	Human and animal	Carcinogenic.
(cristobalite 1 - <10%)			

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
Benzene, bis(phenylmethyl)-, ar-methyl deriv.	Ingestion	Toxic to male reproduction	Rat	NOAEL 250 mg/kg/day	28 days
Benzene, bis(phenylmethyl)-, ar-methyl deriv.	Ingestion	Toxic to female reproduction	Rat	NOAEL 250 mg/kg/day	premating into lactation
Benzene, bis(phenylmethyl)-, ar-methyl deriv.	Ingestion	Toxic to development	Rabbit	LOAEL 10 mg/kg/day	during gestation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Benzene, bis(phenylmet hyl)-, ar- methyl deriv.	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
Benzene, bis(phenylmet hyl)-, ar- methyl deriv.	Ingestion	liver kidney and/or bladder heart skin endocrine system gastrointestinal tract bone, teeth, nails, and/or hair hematopoietic system	Not classified	Rat	NOAEL 500 mg/kg/day	120 days

		immune system muscles nervous system eyes respiratory system vascular system				
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	Inhalation	silicosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	Ingestion	hematopoietic system eyes kidney and/or bladder	Not classified	Rat	NOAEL 3,738 mg/kg/day	90 days

Aspiration Hazard

Name	Value
Benzene, bis(phenylmethyl)-, ar-methyl deriv.	Aspiration hazard

Exposure Levels

Refer Section 8.1 Control Parameters of this Safety Data Sheet.

Interactive Effects

Not determined.

SECTION 12: Ecological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. Additional information leading to material classification in Section 2 is available upon request. In addition, environmental fate and effects data on ingredients may not be reflected in this section because an ingredient is present below the threshold for labelling, an ingredient is not expected to be available for exposure, or the data is considered not relevant to the material as a whole.

12.1. Toxicity

Acute aquatic hazard:

GHS Acute 1: Very toxic to aquatic life.

Chronic aquatic hazard:

GHS Chronic 1: Very toxic to aquatic life with long lasting effects.

No product test data available.

Material	CAS Number	Organism	Туре	Exposure	Test endpoint	Test result
Furan, tetrahydro-, polymer with oxirane, bis[[3- (1- aziridinyl)butyl]carbamate]			Data not available or insufficient for classification			N/A
Glycerides, C14-18	67701-27-3	Green algae	Estimated	72 hours	EC50	>100 mg/l
Glycerides,	67701-27-3	Water flea	Estimated	48 hours	EC50	>100 mg/l

C14-18						
Glycerides, C14-18	67701-27-3	Zebra Fish	Estimated	96 hours	LC50	>100 mg/l
Glycerides, C14-18	67701-27-3	Green algae	Estimated	72 hours	NOEC	100 mg/l
Glycerides, C14-18	67701-27-3	Water flea	Estimated	21 days	NOEC	100 mg/l
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	68855-54-9		Data not available or insufficient for classification			N/A
Benzene, bis(phenylmeth yl)-, ar-methyl deriv.	53585-53-8	Bacteria	Experimental	4.92 hours	EC10	>1,000 mg/l
Benzene, bis(phenylmeth yl)-, ar-methyl deriv.	53585-53-8	Copepods	Experimental	48 hours	LC50	>0.0206 mg/l
Benzene, bis(phenylmeth yl)-, ar-methyl deriv.	53585-53-8	Green algae	Experimental	96 hours	EC50	0.019 mg/l
Benzene, bis(phenylmeth yl)-, ar-methyl deriv.	53585-53-8	Water flea	Experimental	48 hours	EC50	>0.029 mg/l
Benzene, bis(phenylmeth yl)-, ar-methyl deriv.	53585-53-8	Zebra Fish	Experimental	96 hours	No tox obs at lmt of water sol	>100 mg/l
Benzene, bis(phenylmeth yl)-, ar-methyl deriv.	53585-53-8	Green algae	Experimental	96 hours	EC10	0.006 mg/l
Benzene, bis(phenylmeth yl)-, ar-methyl deriv.	53585-53-8	Water flea	Experimental	21 days	NOEC	0.03 mg/l
Sulphonamide	80-39-7	Crustecea other		48 hours	EC50	>=1,000 mg/l
Sulphonamide	80-39-7	Rainbow trout	Estimated	96 hours	LC50	>=80 mg/l
1- Dodecylimidaz ole	4303-67-7	Green Algae	Experimental	72 hours	EC50	0.00557 mg/l
1- Dodecylimidaz ole	4303-67-7	Water flea	Experimental	48 hours	EC50	>100 mg/l
1- Dodecylimidaz ole	4303-67-7	Green algae	Experimental	72 hours	EC10	0.0021 mg/l

12.2. Persistence and degradability

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol

Furan, tetrahydro-, polymer with oxirane, bis[[3- (1- aziridinyl)butyl]carbamate]	110531-92-5	Data not available- insufficient			N/A	
Glycerides, C14-18	67701-27-3	Estimated Biodegradation	28 days	BOD	79 % BOD/ThBOD	OECD 301F - Manometric respirometry
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	68855-54-9	Data not available- insufficient			N/A	
Benzene, bis(phenylmeth yl)-, ar-methyl deriv.	53585-53-8	Experimental Biodegradation	28 days	BOD	0.5 % BOD/ThBOD	OECD 301D - Closed bottle test
Sulphonamide	80-39-7	Estimated Biodegradation	28 days	BOD	25 % weight	OECD 301C - MITI test (I)
1- Dodecylimidaz ole	4303-67-7	Experimental Biodegradation	28 days	CO2 evolution	2-3 % weight	OECD 301B - Modified sturm or CO2

12.3 : Bioaccumulative potential

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Furan, tetrahydro-, polymer with oxirane, bis[[3- (1- aziridinyl)butyl]carbamate]	110531-92-5	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Glycerides, C14-18	67701-27-3	Estimated Bioconcentrati on		Bioaccumulatio n factor	7.4	Non-standard method
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	68855-54-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Benzene, bis(phenylmeth yl)-, ar-methyl deriv.	53585-53-8	Experimental BCF-Carp	56 days	Bioaccumulatio n factor	6300	OECD 305E - Bioaccumulation flow- through fish test
Sulphonamide	80-39-7	Estimated Bioconcentrati on		Log Kow	1.87	Non-standard method
1- Dodecylimidaz ole	4303-67-7	Estimated Bioconcentrati on		Bioaccumulatio n factor	3090	Estimated: Bioconcentration factor

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 waste product in a permitted industrial waste facility.

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:

This product is regulated by the Therapeutics Goods Administration and is exempt from compliance with the Industrial Chemicals (Notification and Assessment) Act 1989 as amended.

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[™] Impregum[™] Penta[™] Soft Quick Step Medium Body Catalyst

1.2. Recommended use and restrictions on use

Recommended use

Dental Product, Impression Material

Restrictions on use

For use by dental professionals only.

1.3. Supplier's details

Address:3M Australia - Building A, 1 Rivett Road, North Ryde NSW 2113Telephone:136 136E Mail:productinfo.au@mmm.comWebsite: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 Sensitizer: Category 1B. Reproductive Toxicity: Category 2. Specific Target Organ Toxicity (repeated exposure): Category 1.

2.2. Label elements

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

Signal word

Danger

Symbols

Exclamation mark |Health Hazard |

Pictograms



Hazard statements	
H317	May cause an allergic skin reaction.
H361	Suspected of damaging fertility or the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure: blood or blood- forming organs.

Precautionary statements

Prevention: P201 P202 P260 P264 P270 P272	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapours/spray. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace.			
Response: P302 + P352 P308 + P313 P314	IF ON SKIN: Wash with plenty of soap and water. IF exposed or concerned: Get medical advice/attention. Get medical advice/attention if you feel unwell.			
P333 + P313 P362 + P364	If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse.			
Storage: P405	Store locked up.			
Disposal: P501	Dispose of contents/container in accordance with applicable local/regional/national/international regulations.			
2.3. Other assigned/identified product hazards				

None known.

2.4. Other hazards which do not result in classification May be harmful if swallowed. Causes mild skin irritation. Toxic to aquatic life.

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	CAS Nbr	% by Weight	
Citric ester	77-90-7	35 - 50	
2-Propenoic acid, 2-methyl-, 3- (trimetoxysilyl)propyl ester, hydrolysis products with silica	68909-20-6	20 - 30	
Sulphonium salt	72140-65-9	15 - 25	
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	68855-54-9	10 - 20	
Polyethylene-polypropylene glycol	9003-11-6	1 - 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

No need for first aid is anticipated.

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). 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

<u>Substance</u> Carbon monoxide. Carbon dioxide. Irritant vapours or gases.

Condition

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.

6.3. Methods and material for containment and cleaning up

Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue. 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

Do not handle until all safety precautions have been read and understood. 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.) Do not get in eyes. Use personal protective equipment (eg. gloves, respirators...) as required. A no-touch technique is recommended. If skin contact occurs, wash skin with soap and water. If product contacts glove, remove and discard glove, wash hands immediately with soap and water and then re-glove.

7.2. Conditions for safe storage including any incompatibilities

Store away from heat. Store away from acids. Store away from strong bases. 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
Silicon dioxide	68855-54-9	Australia OELs	TWA(respirable fraction)(8	
			hours):2 mg/m3	

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association Australia OELs : Australia. Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment

CMRG : Chemical Manufacturer's Recommended Guidelines

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

Sen: Sensitiser

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

8.2. Exposure controls

8.2.1. Engineering controls

Use in a well-ventilated area.

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.

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

See Section 7.1 for additional information on skin protection.

Respiratory protection

None required.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

intormation on basic physical and chemical properties	
Physical state	Solid.
Specific Physical Form:	Paste
Colour	Dark Red
Odour	Slight Acrid
Odour threshold	No data available.
рН	No data available.
Melting point/Freezing point	No data available.
Boiling point/Initial boiling point/Boiling range	Not applicable.
Flash point	Flash point > 93 °C (200 °F)
Evaporation rate	Not applicable.
Flammability (solid, gas)	Not classified
Flammable Limits(LEL)	Not applicable.
Flammable Limits(UEL)	Not applicable.
Vapour pressure	Not applicable.
Vapor Density and/or Relative Vapor Density	Not applicable.
Density	1.1 g/cm3 - 1.5 g/cm3
Relative density	> 1 [<i>Ref Std</i> :WATER=1]
Water solubility	Negligible
Solubility- non-water	No data available.
Partition coefficient: n-octanol/water	No data available.
Autoignition temperature	No data available.
Decomposition temperature	No data available.
Viscosity/Kinematic Viscosity	No data available.
Volatile organic compounds (VOC)	Not applicable.
Percent volatile	Not applicable.
VOC less H2O & exempt solvents	Not applicable.

Nanoparticles

This material contains nanoparticles.

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

Heat.

10.4. Possibility of hazardous reactions

Hazardous polymerisation will not occur.

10.5 Incompatible materials Strong acids. Strong bases. 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

This product may have a characteristic odour; however, no adverse health effects are anticipated.

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. May cause additional health effects (see below).

Additional Health Effects:

Prolonged or repeated exposure may cause target organ effects:

Ocular effects: Signs/symptoms may include blurred or significantly impaired vision. Bone marrow effects: Signs/symptoms may include generalised weakness, pallor of the skin, fatty infiltration of the bone marrow, decreases in the numbers of circulating blood cells, increased susceptibility to infection. Respiratory effects: Signs/symptoms may include cough, shortness of breath, chest tightness, wheezing, increased heart rate, bluish coloured skin (cyanosis), sputum production, changes in lung function tests, and respiratory failure.

Reproductive/Developmental Toxicity:

Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

Carcinogenicity:

Exposures needed to cause the following health effect(s) are not expected during normal, intended use:

Contains a chemical or chemicals which can cause cancer.

Toxicological Data

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

Acute Toxicity

Name	Route	Species	Value
Overall product	Ingestion		No data available; calculated ATE2,000 - 5,000 mg/kg
Citric ester	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
Citric ester	Ingestion	Rat	LD50 > 25,000 mg/kg
2-Propenoic acid, 2-methyl-, 3- (trimetoxysilyl)propyl ester, hydrolysis products with silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
2-Propenoic acid, 2-methyl-, 3- (trimetoxysilyl)propyl ester, hydrolysis products with silica	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
2-Propenoic acid, 2-methyl-, 3- (trimetoxysilyl)propyl ester, hydrolysis products with silica	Ingestion	Rat	LD50 > 5,110 mg/kg
Sulphonium salt	Dermal	Rat	LD50 > 2,000 mg/kg
Sulphonium salt	Ingestion	Rat	LD50 300-2,000 mg/kg
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 2.7 mg/l
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	Ingestion	Rat	LD50 > 2,000 mg/kg
Polyethylene-polypropylene glycol	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
Polyethylene-polypropylene glycol	Ingestion	Rat	LD50 5,700 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
2-Propenoic acid, 2-methyl-, 3- (trimetoxysilyl)propyl ester, hydrolysis products with silica	Rabbit	No significant irritation
Sulphonium salt	Rabbit	Mild irritant
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	In vitro data	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
2-Propenoic acid, 2-methyl-, 3- (trimetoxysilyl)propyl ester, hydrolysis products with silica	Rabbit	No significant irritation
Sulphonium salt	Rabbit	Mild irritant
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	Rabbit	Mild irritant

Skin Sensitisation

Name	Species	Value
2-Propenoic acid, 2-methyl-, 3- (trimetoxysilyl)propyl ester, hydrolysis products with silica	Human and animal	Not classified
Sulphonium salt	Mouse	Sensitising
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	Mouse	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
2-Propenoic acid, 2-methyl-, 3- (trimetoxysilyl)propyl ester, hydrolysis products with silica	In Vitro	Not mutagenic
Sulphonium salt	In Vitro	Not mutagenic
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
2-Propenoic acid, 2-methyl-, 3- (trimetoxysilyl)propyl ester, hydrolysis products with silica	Not specified.	Mouse	Some positive data exist, but the data are not sufficient for classification
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	Inhalation	Human and animal	Carcinogenic.

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
2-Propenoic acid, 2- methyl-, 3- (trimetoxysilyl)propy l ester, hydrolysis products with silica	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
2-Propenoic acid, 2- methyl-, 3- (trimetoxysilyl)propy l ester, hydrolysis products with silica	Ingestion	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
2-Propenoic acid, 2- methyl-, 3- (trimetoxysilyl)propy l ester, hydrolysis products with silica	Ingestion	Not classified for development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
Sulphonium salt	Ingestion	Not classified for development	Rat	NOAEL 100 mg/kg/day	premating into lactation
Sulphonium salt	Ingestion	Toxic to female reproduction	Rat	NOAEL 30 mg/kg/day	premating into lactation
Sulphonium salt	Ingestion	Toxic to male reproduction	Rat	NOAEL 30 mg/kg/day	30 days

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Sulphonium salt	Ingestion	respiratory system	Not classified	Rat	NOAEL 300 mg/kg	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
2-Propenoic acid, 2- methyl-, 3- (trimetoxysily l)propyl ester, hydrolysis products with silica	Inhalation	respiratory system silicosis	Not classified	Human	NOAEL Not available	occupational exposure
Sulphonium salt	Ingestion	bone marrow	Causes damage to organs through prolonged or repeated exposure	Rat	NOAEL 10 mg/kg/day	30 days
Sulphonium salt	Ingestion	respiratory system	May cause damage to organs though prolonged or repeated exposure	Rat	NOAEL 30 mg/kg/day	30 days
Sulphonium salt	Ingestion	eyes	May cause damage to organs though prolonged or repeated exposure	Rat	NOAEL 100 mg/kg/day	30 days
Sulphonium salt	Ingestion	hematopoietic system liver immune system kidney and/or bladder	Not classified	Rat	NOAEL 300 mg/kg/day	30 days
Sulphonium salt	Ingestion	gastrointestinal tract	Not classified	Rat	NOAEL 30 mg/kg/day	30 days
Sulphonium salt	Ingestion	auditory system heart skin endocrine system bone, teeth, nails, and/or hair muscles nervous system vascular system	Not classified	Rat	NOAEL 300 mg/kg/day	30 days
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	Inhalation	silicosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	Ingestion	hematopoietic system eyes kidney and/or bladder	Not classified	Rat	NOAEL 3,738 mg/kg/day	90 days

Aspiration Hazard

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

Exposure Levels

Refer Section 8.1 Control Parameters of this Safety Data Sheet.

Interactive Effects

Not determined.

SECTION 12: Ecological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. Additional information leading to material classification in Section 2 is available upon request. In addition, environmental fate and effects data on ingredients may not be reflected in this section because an ingredient is present below the threshold for labelling, an ingredient is not expected to be available for exposure, or the data is considered not relevant to the material as a whole.

12.1. Toxicity

Acute aquatic hazard:

GHS Acute 2: Toxic to aquatic life.

Chronic aquatic hazard:

Not chronically toxic to aquatic life by GHS criteria.

No product test data available.

Material	CAS Number	Organism	Туре	Exposure	Test endpoint	Test result
Citric ester	77-90-7	Bluegill	Experimental	96 hours	LC50	38 mg/l
Citric ester	77-90-7	Green algae	Experimental	72 hours	EC50	74.4 mg/l
Citric ester	77-90-7	Water flea	Experimental	48 hours	EC50	7.82 mg/l
Citric ester	77-90-7	Green algae	Experimental	72 hours	NOEC	4.65 mg/l
Citric ester	77-90-7	Water flea	Experimental	21 days	NOEC	>1.11 mg/l
2-Propenoic acid, 2-methyl-, 3- (trimetoxysilyl) propyl ester, hydrolysis products with silica		Algae	Estimated	72 hours	EC50	>100 mg/1
Sulphonium salt	72140-65-9	Green Algae	Estimated	72 hours	No tox obs at Imt of water sol	>100 mg/l
Sulphonium salt	72140-65-9	Water flea	Estimated	48 hours	No tox obs at lmt of water sol	>100 mg/l
Sulphonium salt	72140-65-9	Zebra Fish	Estimated	96 hours	No tox obs at lmt of water sol	>100 mg/l
Sulphonium salt	72140-65-9	Activated sludge	Experimental	3 hours	EC50	>1,000 mg/l
Sulphonium salt	72140-65-9	Green Algae	Estimated	72 hours	No tox obs at lmt of water sol	>100 mg/l
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	68855-54-9		Data not available or insufficient for classification			N/A

Polyethylene-	9003-11-6	Data not		N/A
polypropylene		available or		
glycol		insufficient for		
		classification		

12.2. Persistence and degradability

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Citric ester	77-90-7	Experimental Biodegradation	28 days	BOD	48 % weight	Non-standard method
2-Propenoic acid, 2-methyl-, 3- (trimetoxysilyl) propyl ester, hydrolysis products with silica		Data not available- insufficient			N/A	
Sulphonium salt	72140-65-9	Experimental Hydrolysis		Hydrolytic half-life	2.08 hours (t 1/2)	Non-standard method
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	68855-54-9	Data not available- insufficient			N/A	
Polyethylene- polypropylene glycol	9003-11-6	Data not available- insufficient			N/A	

12.3 : Bioaccumulative potential

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Citric ester	77-90-7	Estimated Bioconcentrati on		Bioaccumulatio n factor	5.1	Estimated: Bioconcentration factor
2-Propenoic acid, 2-methyl-, 3- (trimetoxysilyl) propyl ester, hydrolysis products with silica		Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Sulphonium salt	72140-65-9	Experimental Bioconcentrati on		Log Kow	≤0.75	Non-standard method
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	68855-54-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Polyethylene- polypropylene glycol	9003-11-6	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.

Proper destruction may require the use of additional fuel during incineration processes. As a disposal alternative, incinerate in a permitted waste incineration facility.

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:

This product is regulated by the Therapeutics Goods Administration and is exempt from compliance with the Industrial Chemicals (Notification and Assessment) Act 1989 as amended.

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