

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[™] Imprint[™] 3 Putty Soft Refill (36847)

Product Identification Numbers 70-2011-3063-3

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 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:

24-3724-2, 24-3727-5

All components in this KIT are NOT classified as hazardous chemicals 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[™] Imprint[™] 3 Putty Soft 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 NOT 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

Not applicable.

2.2. Label elements

Signal word Not applicable.

Symbols

Not applicable.

Pictograms Not applicable

Precautionary statements

Prevention: P280E

Wear protective gloves.

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	
Alumina	21645-51-2	35 - 40	
Cristobalite	14464-46-1	30 - 35	
Vinyl polydimethylsiloxane	68083-19-2	25 - 30	
Hydrocarbons	8042-47-5	5 - 10	
Amorphous silica	112945-52-5	< 5	
Quartz	14808-60-7	< 5	

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation

No need for first aid is anticipated.

Skin contact

Wash with soap and water. 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

No critical symptoms or effects. See Section 11.1, information on toxicological effects.

4.3. Indication of any immediate medical attention and special treatment required

Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

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

5.2. Special hazards arising from the substance or mixture

None inherent in this product.

Hazardous Decomposition or By-Products

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

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. Observe precautions from other sections.

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

Avoid prolonged or repeated skin contact. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid contact with oxidising agents (eg. chlorine, chromic acid etc.)

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. Store away from amines.

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	112945-52-	Australia OELs	TWA(respirable fraction)(8	
	5		hours):2 mg/m3	
Cristobalite	14464-46-1	ACGIH	TWA(respirable	A2: Suspected human
			fraction):0.025 mg/m3	carcin.
Cristobalite	14464-46-1	Australia OELs	TWA(8 hours):0.1 mg/m3	
Quartz	14808-60-7	ACGIH	TWA(respirable	A2: Suspected human
			fraction):0.025 mg/m3	carcin.
Quartz	14808-60-7	Australia OELs	TWA(8 hours):0.1	
			mg/m3;Limit value not	
			established:	

Aluminum, insoluble compounds	21645-51-2	ACGIH	TWA(respirable fraction):1	A4: Not class. as human
			mg/m3	carcin
Particles (insoluble or poorly	21645-51-2	ACGIH	TWA(inhalable	
soluble) not otherwise specified,			particulates):10 mg/m3	
inhalable particles				
Particles (insoluble or poorly	21645-51-2	ACGIH	TWA(respirable particles):3	
soluble) not otherwise specified,			mg/m3	
respirable particles				
MINERAL OILS, HIGHLY-	8042-47-5	ACGIH	TWA(inhalable fraction):5	A4: Not class. as human
REFINED OILS			mg/m3	carcin
Paraffin oil	8042-47-5	Australia OELs	TWA(as mist)(8 hours):5	
			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

Physical state	Solid.
Specific Physical Form:	Paste
Colour	White
Odour	Odourless
Odour threshold	No data available.
рН	Not applicable.
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	No data available.	
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	1.4 g/cm3 - 1.6 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	Not applicable.	
Autoignition temperature	No data available.	
Decomposition temperature	No data available.	
Viscosity/Kinematic Viscosity	No data available.	
Volatile organic compounds (VOC)	No data available.	
Percent volatile	No data available.	
VOC less H2O & exempt solvents	No data available.	

SECTION 10: Stability and reactivity

10.1 Reactivity

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

10.2 Chemical stability Stable.

10.3. Conditions to avoid Heat.

10.4. Possibility of hazardous reactions Hazardous polymerisation will not occur.

10.5 Incompatible materials

Amines. Strong acids. Strong bases. Strong oxidising agents.

10.6 Hazardous decomposition products

<u>Substance</u>

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

No health effects are expected.

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.

Additional Health Effects:

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 ATE >5,000
			mg/kg
Alumina	Dermal		LD50 estimated to be $> 5,000 \text{ mg/kg}$
Alumina	Inhalation-Dust/Mist	Rat	LC50 > 2.3 mg/l
	(4 hours)		
Alumina	Ingestion	Rat	LD50 > 5,000 mg/kg
Cristobalite	Dermal		LD50 estimated to be $> 5,000 \text{ mg/kg}$
Cristobalite	Ingestion		LD50 estimated to be > 5,000 mg/kg
Vinyl polydimethylsiloxane	Dermal	Rabbit	LD50 > 15,440 mg/kg
Vinyl polydimethylsiloxane	Ingestion	Rat	LD50 > 15,440 mg/kg
Hydrocarbons	Dermal	Rabbit	LD50 > 2,000 mg/kg
Hydrocarbons	Ingestion	Rat	LD50 > 5,000 mg/kg
Quartz	Dermal		LD50 estimated to be $> 5,000 \text{ mg/kg}$
Quartz	Ingestion		LD50 estimated to be > 5,000 mg/kg
Amorphous silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
Amorphous silica	Inhalation-Dust/Mist	Rat	LC50 > 0.691 mg/l
-	(4 hours)		
Amorphous silica	Ingestion	Rat	LD50 > 5,110 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Alumina	Rabbit	No significant irritation
Cristobalite	Professional judgement	No significant irritation
Vinyl polydimethylsiloxane	Rabbit	No significant irritation
Hydrocarbons	Rabbit	No significant irritation
Amorphous silica	Rabbit	No significant irritation
Quartz	Professional judgement	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Alumina	Rabbit	No significant irritation
Vinyl polydimethylsiloxane	Rabbit	Mild irritant
Hydrocarbons	Rabbit	Mild irritant
Amorphous silica	Rabbit	No significant irritation

Skin Sensitisation

Name	Species	Value
Alumina	Guinea pig	Not classified
Hydrocarbons	Guinea pig	Not classified
Amorphous silica	Human and animal	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
Cristobalite	In Vitro	Some positive data exist, but the data are not sufficient for classification
Cristobalite	In vivo	Some positive data exist, but the data are not sufficient for classification
Hydrocarbons	In Vitro	Not mutagenic
Amorphous silica	In Vitro	Not mutagenic
Quartz	In Vitro	Some positive data exist, but the data are not sufficient for classification
Quartz	In vivo	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Alumina	Not specified.	Multiple animal	Not carcinogenic
		species	
Cristobalite	Inhalation	Human and animal	Carcinogenic.
Hydrocarbons	Dermal	Mouse	Not carcinogenic
Hydrocarbons	Inhalation	Multiple animal	Not carcinogenic
		species	
Amorphous silica	Not specified.	Mouse	Some positive data exist, but the data
	_		are not sufficient for classification
Quartz	Inhalation	Human and animal	Carcinogenic.

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
Alumina	Ingestion	Not classified for	Rat	NOAEL 768	during
		development		mg/kg/day	organogenesis
Hydrocarbons	Ingestion	Not classified for	Rat	NOAEL	13 weeks
		female reproduction		4,350	
		_		mg/kg/day	
Hydrocarbons	Ingestion	Not classified for	Rat	NOAEL	13 weeks
		male reproduction		4,350	
				mg/kg/day	
Hydrocarbons	Ingestion	Not classified for	Rat	NOAEL	during gestation

		development		4,350	
				mg/kg/day	
Amorphous silica	Ingestion	Not classified for	Rat	NOAEL 509	1 generation
		female reproduction		mg/kg/day	
Amorphous silica	Ingestion	Not classified for	Rat	NOAEL 497	1 generation
	-	male reproduction		mg/kg/day	
Amorphous silica	Ingestion	Not classified for	Rat	NOAEL	during
	-	development		1,350	organogenesis
				mg/kg/day	

Target Organ(s)

Specific Target Organ Toxicity - single exposure

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

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Cristobalite	Inhalation	silicosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure
Hydrocarbons	Ingestion	hematopoietic system	Not classified	Rat	NOAEL 1,381 mg/kg/day	90 days
Hydrocarbons	Ingestion	liver immune system	Not classified	Rat	NOAEL 1,336 mg/kg/day	90 days
Amorphous silica	Inhalation	respiratory system silicosis	Not classified	Human	NOAEL Not available	occupational exposure
Quartz	Inhalation	silicosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure

Specific Target Organ Toxicity - repeated exposure

Aspiration Hazard

Name	Value
Hydrocarbons	Aspiration hazard

Exposure Levels

Refer Section 8.1 Control Parameters of this Safety Data Sheet.

Interactive Effects

Not determined.

SECTION 12: Ecological information

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

12.1. Toxicity

Acute aquatic hazard:

Not acutely toxic to aquatic life by GHS criteria.

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
Alumina	21645-51-2	Fish	Experimental	96 hours	No tox obs at lmt of water sol	>100 mg/l
Alumina	21645-51-2	Green algae	Experimental	72 hours	No tox obs at lmt of water sol	>100 mg/l
Alumina	21645-51-2	Water flea	Experimental	48 hours	No tox obs at lmt of water sol	>100 mg/l
Alumina	21645-51-2	Green algae	Experimental	72 hours	No tox obs at lmt of water sol	100 mg/l
Cristobalite	14464-46-1		Data not available or insufficient for classification			N/A
Vinyl polydimethylsil oxane	68083-19-2		Data not available or insufficient for classification			N/A
Hydrocarbons	8042-47-5	Water flea	Estimated	48 hours	EL50	>100 mg/l
Hydrocarbons	8042-47-5	Bluegill	Experimental	96 hours	LL50	>100 mg/l
Hydrocarbons	8042-47-5	Green algae	Estimated	72 hours	NOEL	100 mg/l
Hydrocarbons	8042-47-5	Water flea	Estimated	21 days	NOEL	>100 mg/l
Amorphous silica	112945-52-5	Green algae	Experimental	72 hours	EC50	>100 mg/l
Amorphous silica	112945-52-5	Water flea	Experimental	24 hours	EC50	>100 mg/l
Amorphous silica	112945-52-5	Zebra Fish	Experimental	96 hours	LC50	>100 mg/l
Amorphous silica	112945-52-5	Green algae	Experimental	72 hours	NOEC	60 mg/l
Quartz	14808-60-7	Green algae	Estimated	72 hours	EC50	440 mg/l
Quartz	14808-60-7	Water flea	Estimated	48 hours	EC50	7,600 mg/l
Quartz	14808-60-7	Zebra Fish	Estimated	96 hours	LC50	5,000 mg/l
Quartz	14808-60-7	Green algae	Estimated	72 hours	NOEC	60 mg/l

12.2. Persistence and degradability

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Alumina	21645-51-2	Data not available- insufficient	N/A	N/A	N/A	N/A
Cristobalite	14464-46-1	Data not available- insufficient	N/A	N/A	N/A	N/A
Vinyl polydimethylsil oxane	68083-19-2	Data not available- insufficient	N/A	N/A	N/A	N/A
Hydrocarbons	8042-47-5	Experimental Biodegradation	28 days	CO2 evolution	0 % weight	OECD 301B - Modified sturm or CO2
Amorphous silica	112945-52-5	Data not available-	N/A	N/A	N/A	N/A

	insufficient				
Quartz	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
Alumina	21645-51-2	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Cristobalite	14464-46-1	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Vinyl polydimethylsil oxane	68083-19-2	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Hydrocarbons	8042-47-5	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Amorphous silica	112945-52-5	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Quartz	14808-60-7	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 waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility. If no other disposal options are available, waste product 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:

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[™] Imprint[™] 3 Putty Soft Base Paste

1.2. Recommended use and restrictions on use

Recommended use

Dental Material, 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 NOT 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

Not applicable.

2.2. Label elements

Signal word Not applicable.

Symbols

Not applicable.

Pictograms Not applicable

Precautionary statements

Prevention: P280E

Wear protective gloves.

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
Alumina	21645-51-2	35 - 40
Cristobalite	14464-46-1	30 - 35
Vinyl polydimethylsiloxane	68083-19-2	20 - 25
Hydrocarbons	8042-47-5	5 - 10
Amorphous silica	112945-52-5	< 5
Dimethyl methyl hydrogen silicone fluid	68037-59-2	< 5
Quartz	14808-60-7	< 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

Wash with soap and water. If signs/symptoms develop, get medical attention.

Eye contact

Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, get medical attention.

If swallowed

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

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

No critical symptoms or effects. See Section 11.1, information on toxicological effects.

4.3. Indication of any immediate medical attention and special treatment required

Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

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

5.2. Special hazards arising from the substance or mixture

None inherent in this product.

Hazardous Decomposition or By-Products

<u>Substance</u>

Carbon monoxide. Carbon dioxide. Irritant vapours or gases.

5.3. Special protective actions for fire-fighters

No special protective actions for fire-fighters are anticipated.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Ventilate the area with fresh air. Observe precautions from other sections.

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

Avoid prolonged or repeated skin contact. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid contact with oxidising agents (eg. chlorine, chromic acid etc.)

7.2. Conditions for safe storage including any incompatibilities

No special storage requirements. Store away from heat. Store away from acids. Store away from strong bases. Store away from oxidising agents. Store away from amines.

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
Cristobalite	14464-46-1	ACGIH	TWA(respirable	A2: Suspected human
			fraction):0.025 mg/m3	carcin.
Cristobalite	14464-46-1	Australia OELs	TWA(8 hours):0.1 mg/m3	
Quartz	14808-60-7	ACGIH	TWA(respirable	A2: Suspected human
			fraction):0.025 mg/m3	carcin.
Quartz	14808-60-7	Australia OELs	TWA(8 hours):0.1	
			mg/m3;Limit value not	
			established:	

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

<u>Condition</u> During combustion. During combustion. During combustion. 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

Bharden betete	
Physical state	Solid.
Specific Physical Form:	Paste
Colour	Burgundy
Odour	Odourless
Odour threshold	No data available.
рН	Not applicable.
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	No data available.
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	Approximately 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)	No data available.
Percent volatile	No data available.
VOC less H2O & exempt solvents	No data available.

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

Amines. 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

No known health effects.

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.

Additional Health Effects:

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 ATE >5,000 mg/kg
Alumina	Dermal		LD50 estimated to be > 5,000 mg/kg
Alumina	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 2.3 mg/l
Alumina	Ingestion	Rat	LD50 > 5,000 mg/kg
Cristobalite	Dermal		LD50 estimated to be > 5,000 mg/kg
Cristobalite	Ingestion		LD50 estimated to be > 5,000 mg/kg
Vinyl polydimethylsiloxane	Dermal	Rabbit	LD50 > 15,440 mg/kg
Vinyl polydimethylsiloxane	Ingestion	Rat	LD50 > 15,440 mg/kg
Hydrocarbons	Dermal	Rabbit	LD50 > 2,000 mg/kg
Hydrocarbons	Ingestion	Rat	LD50 > 5,000 mg/kg
Quartz	Dermal		LD50 estimated to be $> 5,000 \text{ mg/kg}$
Quartz	Ingestion		LD50 estimated to be > 5,000 mg/kg
Amorphous silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
Dimethyl methyl hydrogen silicone fluid	Dermal	Rabbit	LD50 > 2,000 mg/kg
Amorphous silica	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Amorphous silica	Ingestion	Rat	LD50 > 5,110 mg/kg
Dimethyl methyl hydrogen silicone fluid	Ingestion	Rat	LD50 > 2,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Alumina	Rabbit	No significant irritation
Cristobalite	Professional judgement	No significant irritation
Vinyl polydimethylsiloxane	Rabbit	No significant irritation
Hydrocarbons	Rabbit	No significant irritation
Amorphous silica	Rabbit	No significant irritation
Dimethyl methyl hydrogen silicone fluid	Rabbit	No significant irritation
Quartz	Professional judgement	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Alumina	Rabbit	No significant irritation
Vinyl polydimethylsiloxane	Rabbit	Mild irritant
Hydrocarbons	Rabbit	Mild irritant

Amorphous silica	Rabbit	No significant irritation
Dimethyl methyl hydrogen silicone fluid	Rabbit	Mild irritant

Skin Sensitisation

Name	Species	Value
Alumina	Guinea pig	Not classified
Hydrocarbons	Guinea pig	Not classified
Amorphous silica	Human and animal	Not classified
Dimethyl methyl hydrogen silicone fluid	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
Cristobalite	In Vitro	Some positive data exist, but the data are not sufficient for classification
Cristobalite	In vivo	Some positive data exist, but the data are not sufficient for classification
Hydrocarbons	In Vitro	Not mutagenic
Amorphous silica	In Vitro	Not mutagenic
Dimethyl methyl hydrogen silicone fluid	In Vitro	Not mutagenic
Quartz	In Vitro	Some positive data exist, but the data are not sufficient for classification
Quartz	In vivo	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Alumina	Not specified.	Multiple animal	Not carcinogenic
		species	
Cristobalite	Inhalation	Human and animal	Carcinogenic.
Hydrocarbons	Dermal	Mouse	Not carcinogenic
Hydrocarbons	Inhalation	Multiple animal	Not carcinogenic
		species	
Amorphous silica	Not specified.	Mouse	Some positive data exist, but the data
			are not sufficient for classification
Quartz	Inhalation	Human and animal	Carcinogenic.

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
Alumina	Ingestion	Not classified for	Rat	NOAEL 768	during
		development		mg/kg/day	organogenesis
Hydrocarbons	Ingestion	Not classified for	Rat	NOAEL	13 weeks
		female reproduction		4,350	
		_		mg/kg/day	
Hydrocarbons	Ingestion	Not classified for	Rat	NOAEL	13 weeks
		male reproduction		4,350	
				mg/kg/day	
Hydrocarbons	Ingestion	Not classified for	Rat	NOAEL	during gestation
		development		4,350	
				mg/kg/day	
Amorphous silica	Ingestion	Not classified for	Rat	NOAEL 509	1 generation
-	-	female reproduction		mg/kg/day	

Amorphous silica	Ingestion	Not classified for	Rat	NOAEL 497	1 generation
		male reproduction		mg/kg/day	
Amorphous silica	Ingestion	Not classified for development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis

Target Organ(s)

Specific Target Organ Toxicity - single exposure

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

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Cristobalite	Inhalation	silicosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure
Hydrocarbons	Ingestion	hematopoietic system	Not classified	Rat	NOAEL 1,381 mg/kg/day	90 days
Hydrocarbons	Ingestion	liver immune system	Not classified	Rat	NOAEL 1,336 mg/kg/day	90 days
Amorphous silica	Inhalation	respiratory system silicosis	Not classified	Human	NOAEL Not available	occupational exposure
Quartz	Inhalation	silicosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure

Specific Target Organ Toxicity - repeated exposur

Aspiration Hazard

Name	Value
Hydrocarbons	Aspiration hazard

Exposure Levels

Refer Section 8.1 Control Parameters of this Safety Data Sheet.

Interactive Effects

Not determined.

SECTION 12: Ecological information

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

12.1. Toxicity

Acute aquatic hazard:

Not acutely toxic to aquatic life by GHS criteria.

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
Alumina	21645-51-2	Fish other	Experimental	96 hours	No tox obs at	>100 mg/l
			-		lmt of water sol	-
Alumina	21645-51-2	Green Algae	Experimental	72 hours	No tox obs at	>100 mg/l
					lmt of water sol	
Alumina	21645-51-2	Water flea	Experimental	48 hours	No tox obs at	>100 mg/l
					lmt of water sol	
Alumina	21645-51-2	Green Algae	Experimental	72 hours	No tox obs at	100 mg/l
					lmt of water sol	
Cristobalite	14464-46-1		Data not			N/A
			available or			
			insufficient for			
			classification			
Vinyl	68083-19-2		Data not			N/A
polydimethylsil			available or			
oxane			insufficient for			
TT 1 1	0040 47 5		classification	40.1		. 100 //
Hydrocarbons	8042-47-5	Water flea	Estimated	48 hours	EL50	>100 mg/l
Hydrocarbons	8042-47-5	Bluegill	Experimental	96 hours	LL50	>100 mg/l
Hydrocarbons	8042-47-5	Green algae	Estimated	72 hours	NOEL	100 mg/l
Hydrocarbons	8042-47-5	Water flea	Estimated	21 days	NOEL	>100 mg/l
Amorphous silica	112945-52-5	Green Algae	Experimental	72 hours	EC50	>100 mg/l
Amorphous	112945-52-5	Water flea	Experimental	24 hours	EC50	>100 mg/l
silica						C C
Amorphous	112945-52-5	Zebra Fish	Experimental	96 hours	LC50	>100 mg/l
silica			_			_
Amorphous	112945-52-5	Green Algae	Experimental	72 hours	NOEC	60 mg/l
silica		_	_			_
Dimethyl	68037-59-2		Data not			N/A
methyl			available or			
hydrogen			insufficient for			
silicone fluid			classification			
Quartz	14808-60-7	Green Algae	Estimated	72 hours	EC50	440 mg/l
Quartz	14808-60-7	Water flea	Estimated	48 hours	EC50	7,600 mg/l
Quartz	14808-60-7	Zebra Fish	Estimated	96 hours	LC50	5,000 mg/l
Quartz	14808-60-7	Green Algae	Estimated	72 hours	NOEC	60 mg/l

12.2. Persistence and degradability

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Alumina	21645-51-2	Data not available- insufficient	N/A	N/A	N/A	N/A
Cristobalite	14464-46-1	Data not available- insufficient	N/A	N/A	N/A	N/A
Vinyl polydimethylsil oxane	68083-19-2	Data not available- insufficient	N/A	N/A	N/A	N/A
Hydrocarbons	8042-47-5	Experimental Biodegradation	28 days	CO2 evolution	0 % weight	OECD 301B - Modified sturm or CO2
Amorphous silica	112945-52-5	Data not available-	N/A	N/A	N/A	N/A

		insufficient					
Dimethyl methyl hydrogen silicone fluid	68037-59-2	Data not available- insufficient	N/A	N/A	N/A	N/A	
Quartz	14808-60-7	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
Alumina	21645-51-2	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Cristobalite	14464-46-1	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Vinyl polydimethylsil oxane	68083-19-2	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Hydrocarbons	8042-47-5	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Amorphous silica	112945-52-5	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Dimethyl methyl hydrogen silicone fluid	68037-59-2	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Quartz	14808-60-7	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 waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes.

SECTION 14: Transport Information

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

UN No.: Not applicable. Proper shipping name: Not applicable. Class/Division: Not applicable. Sub Risk: Not applicable. Packing Group: Not applicable.

Hazchem Code: Not applicable IERG: Not applicable.

International Air Transport Association (IATA) - Air Transport UN No.: Not applicable. Proper shipping name: Not applicable. Class/Division: Not applicable.

Sub Risk: Not applicable. Packing Group: Not applicable. International Maritime Dangerous Goods Code (IMDG)- Marine Transport

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