



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™ 4 Penta™ Putty Refill (71486)

Product Identification Numbers

70-2011-4141-6

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:

31-6426-6, 31-5533-0

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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Document group:	31-6426-6	Version number:	3.00
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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™ 4 Penta™ Putty 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 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 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

2.3. Other assigned/identified product hazards

None known.

2.4. Other hazards which do not result in classification

May be harmful if swallowed.

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	CAS Nbr	% by Weight
Sodium Aluminium Silicate	37244-96-5	70 - 80
Vinyl-Polydimethylsiloxane	68083-19-2	15 - 23
Poly(Dimethylsiloxane)	63148-62-9	1 - 3
White Mineral Oil (Petroleum)	8042-47-5	1 - 3
Chromium oxide (Cr ₂ O ₃)	1308-38-9	< 0.3

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**Substance**

Carbon monoxide.

Condition

During combustion.

Carbon dioxide.
Irritant vapours or gases.

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

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

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

No occupational exposure limit values exist for any of the components listed in Section 3 of this Safety Data Sheet.

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	Light Green
Odour	Slight Odour, Characteristic Odour
Odour threshold	<i>No data available.</i>
pH	<i>Not applicable.</i>
Melting point/Freezing point	<i>Not applicable.</i>
Boiling point/Initial boiling point/Boiling range	<i>Not applicable.</i>
Flash point	Flash point > 93 °C (200 °F)
Evaporation rate	Negligible
Flammability (solid, gas)	Not classified
Flammable Limits(LEL)	<i>Not applicable.</i>
Flammable Limits(UEL)	<i>Not applicable.</i>
Vapour pressure	<i>No data available.</i>
Vapour Density and/or Relative Vapour Density	<i>No data available.</i>
Density	1.7 g/cm ³ - 1.9 g/cm ³
Relative density	1.7 - 1.9 [Ref Std: WATER=1]
Water solubility	Negligible
Solubility- non-water	<i>No data available.</i>
Partition coefficient: n-octanol/water	<i>No data available.</i>
Autoignition temperature	<i>Not applicable.</i>
Decomposition temperature	<i>No data available.</i>
Viscosity/Kinematic Viscosity	<i>No data available.</i>
Volatile organic compounds (VOC)	<i>Not applicable.</i>
Percent volatile	<i>Not applicable.</i>
VOC less H₂O & exempt solvents	<i>Not applicable.</i>

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****Condition**

None known.

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

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

May be harmful if swallowed.

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

Toxicological Data

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

Acute Toxicity

Name	Route	Species	Value
Overall product	Ingestion		No data available; calculated ATE _{2,000} - 5,000 mg/kg
Sodium Aluminium Silicate	Dermal		LD ₅₀ estimated to be > 5,000 mg/kg
Sodium Aluminium Silicate	Ingestion		LD ₅₀ estimated to be 2,000 - 5,000 mg/kg
Vinyl-Polydimethylsiloxane	Dermal	Rabbit	LD ₅₀ > 15,440 mg/kg
Vinyl-Polydimethylsiloxane	Ingestion	Rat	LD ₅₀ > 15,440 mg/kg
White Mineral Oil (Petroleum)	Dermal	Rabbit	LD ₅₀ > 2,000 mg/kg
White Mineral Oil (Petroleum)	Ingestion	Rat	LD ₅₀ > 5,000 mg/kg
Poly(Dimethylsiloxane)	Dermal	Rabbit	LD ₅₀ > 19,400 mg/kg
Poly(Dimethylsiloxane)	Ingestion	Rat	LD ₅₀ > 17,000 mg/kg
Chromium oxide (Cr ₂ O ₃)	Dermal	Professional	LD ₅₀ estimated to be > 5,000 mg/kg

		judgement	
Chromium oxide (Cr2O3)	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5.41 mg/l
Chromium oxide (Cr2O3)	Ingestion	Rat	LD50 > 5,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Sodium Aluminium Silicate	Professional judgement	No significant irritation
Vinyl-Polydimethylsiloxane	Rabbit	No significant irritation
White Mineral Oil (Petroleum)	Rabbit	No significant irritation
Poly(Dimethylsiloxane)	Rabbit	No significant irritation
Chromium oxide (Cr2O3)	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Sodium Aluminium Silicate	Professional judgement	Mild irritant
Vinyl-Polydimethylsiloxane	Rabbit	Mild irritant
White Mineral Oil (Petroleum)	Rabbit	Mild irritant
Poly(Dimethylsiloxane)	Rabbit	No significant irritation
Chromium oxide (Cr2O3)	Rabbit	No significant irritation

Skin Sensitisation

Name	Species	Value
White Mineral Oil (Petroleum)	Guinea pig	Not classified
Chromium oxide (Cr2O3)	similar compounds	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
White Mineral Oil (Petroleum)	In Vitro	Not mutagenic
Chromium oxide (Cr2O3)	In vivo	Not mutagenic
Chromium oxide (Cr2O3)	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
White Mineral Oil (Petroleum)	Dermal	Mouse	Not carcinogenic
White Mineral Oil (Petroleum)	Inhalation	Multiple animal species	Not carcinogenic
Chromium oxide (Cr2O3)	Ingestion	Rat	Not carcinogenic

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
White Mineral Oil (Petroleum)	Ingestion	Not classified for female reproduction	Rat	NOAEL 4,350 mg/kg/day	13 weeks
White Mineral Oil	Ingestion	Not classified for	Rat	NOAEL	13 weeks

(Petroleum)		male reproduction		4,350 mg/kg/day	
White Mineral Oil (Petroleum)	Ingestion	Not classified for development	Rat	NOAEL 4,350 mg/kg/day	during gestation
Chromium oxide (Cr2O3)	Ingestion	Not classified for female reproduction	Rat	NOAEL 2,000 mg/kg/day	90 days
Chromium oxide (Cr2O3)	Ingestion	Not classified for male reproduction	Rat	NOAEL 2,000 mg/kg/day	90 days
Chromium oxide (Cr2O3)	Ingestion	Not classified for development	Rat	NOAEL 2,000 mg/kg/day	90 days

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Chromium oxide (Cr2O3)	Inhalation	respiratory system	Not classified	Rat	NOAEL 40 mg	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
White Mineral Oil (Petroleum)	Ingestion	hematopoietic system	Not classified	Rat	NOAEL 1,381 mg/kg/day	90 days
White Mineral Oil (Petroleum)	Ingestion	liver immune system	Not classified	Rat	NOAEL 1,336 mg/kg/day	90 days
Chromium oxide (Cr2O3)	Inhalation	immune system respiratory system hematopoietic system liver kidney and/or bladder	Not classified	Rat	NOAEL 44 mg/m3	90 days

Aspiration Hazard

Name	Value
White Mineral Oil (Petroleum)	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	Type	Exposure	Test endpoint	Test result
Sodium Aluminium Silicate	37244-96-5		Data not available or insufficient for classification			N/A
Vinyl-Polydimethylsiloxane	68083-19-2		Data not available or insufficient for classification			N/A
Poly(Dimethylsiloxane)	63148-62-9		Data not available or insufficient for classification			N/A
White Mineral Oil (Petroleum)	8042-47-5	Water flea	Estimated	48 hours	EL50	>100 mg/l
White Mineral Oil (Petroleum)	8042-47-5	Bluegill	Experimental	96 hours	LL50	>100 mg/l
White Mineral Oil (Petroleum)	8042-47-5	Green algae	Estimated	72 hours	NOEL	100 mg/l
White Mineral Oil (Petroleum)	8042-47-5	Water flea	Estimated	21 days	NOEL	>100 mg/l
Chromium oxide (Cr2O3)	1308-38-9	Green algae	Estimated	72 hours	No tox obs at lmt of water sol	>100 mg/l
Chromium oxide (Cr2O3)	1308-38-9	Water flea	Estimated	48 hours	No tox obs at lmt of water sol	>100 mg/l
Chromium oxide (Cr2O3)	1308-38-9	Zebra Fish	Experimental	96 hours	No tox obs at lmt of water sol	>100 mg/l
Chromium oxide (Cr2O3)	1308-38-9	Green algae	Estimated	72 hours	No tox obs at lmt of water sol	>100 mg/l
Chromium oxide (Cr2O3)	1308-38-9	Water flea	Estimated	21 days	No tox obs at lmt of water sol	>100 mg/l
Chromium oxide (Cr2O3)	1308-38-9	Zebra Fish	Estimated	30 days	No tox obs at lmt of water sol	>100 mg/l

12.2. Persistence and degradability

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Sodium Aluminium Silicate	37244-96-5	Data not available-insufficient			N/A	
Vinyl-Polydimethylsiloxane	68083-19-2	Data not available-insufficient			N/A	
Poly(Dimethylsiloxane)	63148-62-9	Data not			N/A	

iloxane)		available- insufficient				
White Mineral Oil (Petroleum)	8042-47-5	Experimental Biodegradation	28 days	CO2 evolution	0 % weight	OECD 301B - Modified sturm or CO2
Chromium oxide (Cr2O3)	1308-38-9	Data not available- insufficient			N/A	

12.3 : Bioaccumulative potential

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Sodium Aluminium Silicate	37244-96-5	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Vinyl-Polydimethylsiloxane	68083-19-2	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Poly(Dimethylsiloxane)	63148-62-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
White Mineral Oil (Petroleum)	8042-47-5	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Chromium oxide (Cr2O3)	1308-38-9	Estimated BCF - Other		Bioaccumulation factor	800	Non-standard method

12.4. Mobility in soil

Please contact manufacturer for more details

12.5 Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Disposal methods

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

Dispose of completely cured (or polymerized) material in a permitted industrial waste facility. As a disposal alternative, incinerate uncured product in a permitted waste incineration facility. If no other disposal options are available, waste product that has been completely cured or polymerized may be placed in a landfill properly designed for industrial waste.

SECTION 14: Transport Information

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

UN No.: Not applicable.

Proper shipping name: Not applicable.

Class/Division: Not applicable.

Sub Risk: Not applicable.

Packing Group: Not applicable.

Hazchem Code: Not applicable

IERG: Not applicable.

International Air Transport Association (IATA) - Air Transport

UN No.: Not applicable.

Proper shipping name: Not applicable.

Class/Division: Not applicable.

Sub Risk: Not applicable.

Packing Group: Not applicable.

International Maritime Dangerous Goods Code (IMDG)- Marine Transport

UN No.: Not applicable.

Proper shipping name: Not applicable.

Class/Division: Not applicable.

Sub Risk: Not applicable.

Packing Group: Not applicable.

Marine Pollutant: Not applicable.

SECTION 15: Regulatory information

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

Australian Inventory Status:

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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Document group:	31-5533-0	Version number:	3.00
Issue Date:	03/08/2021	Supersedes date:	19/05/2016

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™ 4 Penta™ Putty 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 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 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

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
Quartz (14808-60-7), surface modified with silsesquioxanes, methyl, ethoxy-terminated (CAS 104780-78-1), bulk material	None	60 - 80
Vinyl-polydimethyl siloxane	68083-19-2	1 - 20
Dimethyl methyl hydrogen silicone fluid	68037-59-2	1 - 10
Paraffin oils	8012-95-1	< 10
Aluminium oxide	1344-28-1	< 2
Chromium (III) oxide	1308-38-9	< 2

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

No need for first aid is anticipated.

Skin contact

No need for first aid is anticipated.

Eye contact

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

If swallowed

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

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

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

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

Not applicable

SECTION 5: Fire-fighting measures**5.1. Suitable extinguishing media**

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

5.2. Special hazards arising from the substance or mixture

None inherent in this product.

Hazardous Decomposition or By-Products**Substance**

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**

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
Chromium (III) oxide	1308-38-9	ACGIH	TWA(as Cr(III), inhalable fraction): 0.003 mg/m ³ ;TWA(as Cr): 0.5 mg/m ³	A4: Not class. as human carcin
Chromium (III) oxide	1308-38-9	Australia OELs	TWA(as Cr)(8 hours):0.5 mg/m ³	
Aluminium oxide	1344-28-1	Australia OELs	TWA(Inspirable dust)(8 hours):10 mg/m ³	
Paraffin oils	8012-95-1	Australia OELs	TWA(as mist)(8 hours):5 mg/m ³	

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

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

CMRG : Chemical Manufacturer's Recommended Guidelines
 TWA: Time-Weighted-Average
 STEL: Short Term Exposure Limit
 CEIL: Ceiling
 Sen: Sensitiser
 Sk: Absorption through the skin may be a significant source of exposure.

8.2. Exposure controls

8.2.1. Engineering controls

Use 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	Dark Green
Odour	Light Minty
Odour threshold	<i>No data available.</i>
pH	<i>Not applicable.</i>
Melting point/Freezing point	<i>Not applicable.</i>
Boiling point/Initial boiling point/Boiling range	<i>Not applicable.</i>
Flash point	No flash point
Evaporation rate	<i>Not applicable.</i>
Flammability (solid, gas)	Not classified
Flammable Limits(LEL)	<i>Not applicable.</i>
Flammable Limits(UEL)	<i>Not applicable.</i>
Vapour pressure	<i>No data available.</i>
Vapor Density and/or Relative Vapor Density	<i>No data available.</i>
Density	1.7 g/cm ³ - 1.9 g/cm ³
Relative density	1.7 - 1.9 [Ref Std:WATER=1]
Water solubility	Negligible
Solubility- non-water	<i>No data available.</i>
Partition coefficient: n-octanol/water	<i>No data available.</i>
Autoignition temperature	<i>Not applicable.</i>
Decomposition temperature	<i>No data available.</i>

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 is considered to be non reactive under normal use conditions. 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****Condition**

None known.

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

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.

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
Quartz (14808-60-7), surface modified with silsesquioxanes, methyl, ethoxy-terminated (CAS 104780-78-1), bulk material	Dermal		LD50 estimated to be > 5,000 mg/kg
Quartz (14808-60-7), surface modified with silsesquioxanes, methyl, ethoxy-terminated (CAS 104780-78-1), bulk material	Ingestion		LD50 estimated to be > 5,000 mg/kg
Vinyl-polydimethyl siloxane	Dermal	Rabbit	LD50 > 15,440 mg/kg
Vinyl-polydimethyl siloxane	Ingestion	Rat	LD50 > 15,440 mg/kg
Paraffin oils	Dermal		LD50 estimated to be > 5,000 mg/kg
Paraffin oils	Ingestion	Rat	LD50 > 24,000 mg/kg
Dimethyl methyl hydrogen silicone fluid	Dermal	Rabbit	LD50 > 2,000 mg/kg
Dimethyl methyl hydrogen silicone fluid	Ingestion	Rat	LD50 > 2,000 mg/kg
Aluminium oxide	Dermal		LD50 estimated to be > 5,000 mg/kg
Aluminium oxide	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 2.3 mg/l
Aluminium oxide	Ingestion	Rat	LD50 > 5,000 mg/kg
Chromium (III) oxide	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
Chromium (III) oxide	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5.41 mg/l
Chromium (III) oxide	Ingestion	Rat	LD50 > 5,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Quartz (14808-60-7), surface modified with silsesquioxanes, methyl, ethoxy-terminated (CAS 104780-78-1), bulk material		No significant irritation
Vinyl-polydimethyl siloxane	Rabbit	No significant irritation
Dimethyl methyl hydrogen silicone fluid	Rabbit	No significant irritation
Aluminium oxide	Rabbit	No significant irritation
Chromium (III) oxide	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Vinyl-polydimethyl siloxane	Rabbit	Mild irritant
Dimethyl methyl hydrogen silicone fluid	Rabbit	Mild irritant
Aluminium oxide	Rabbit	No significant irritation
Chromium (III) oxide	Rabbit	No significant irritation

Skin Sensitisation

Name	Species	Value
Dimethyl methyl hydrogen silicone fluid	Guinea pig	Not classified
Chromium (III) oxide	similar compounds	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
Quartz (14808-60-7), surface modified with silsesquioxanes, methyl, ethoxy-terminated (CAS 104780-78-1), bulk material	In Vitro	Some positive data exist, but the data are not sufficient for classification
Quartz (14808-60-7), surface modified with silsesquioxanes, methyl, ethoxy-terminated (CAS 104780-78-1), bulk material	In vivo	Some positive data exist, but the data are not sufficient for classification
Dimethyl methyl hydrogen silicone fluid	In Vitro	Not mutagenic
Aluminium oxide	In Vitro	Not mutagenic
Chromium (III) oxide	In vivo	Not mutagenic
Chromium (III) oxide	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Quartz (14808-60-7), surface modified with silsesquioxanes, methyl, ethoxy-terminated (CAS 104780-78-1), bulk material	Inhalation	Human and animal	Carcinogenic.
Aluminium oxide	Inhalation	Rat	Not carcinogenic
Chromium (III) oxide	Ingestion	Rat	Not carcinogenic

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

Name	Route	Value	Species	Test result	Exposure Duration
Chromium (III) oxide	Ingestion	Not classified for female reproduction	Rat	NOAEL 2,000 mg/kg/day	90 days
Chromium (III) oxide	Ingestion	Not classified for male reproduction	Rat	NOAEL 2,000 mg/kg/day	90 days
Chromium (III) oxide	Ingestion	Not classified for development	Rat	NOAEL 2,000 mg/kg/day	90 days

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

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Chromium (III) oxide	Inhalation	respiratory system	Not classified	Rat	NOAEL 40 mg	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target	Value	Species	Test result	Exposure
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		Organ(s)				Duration
Quartz (14808-60-7), surface modified with silsesquioxane s, methyl, ethoxy-terminated (CAS 104780-78-1), bulk material	Inhalation	silicosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure
Aluminium oxide	Inhalation	pneumoconiosis	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
Aluminium oxide	Inhalation	pulmonary fibrosis	Not classified	Human	NOAEL Not available	occupational exposure
Chromium (III) oxide	Inhalation	immune system respiratory system hematopoietic system liver kidney and/or bladder	Not classified	Rat	NOAEL 44 mg/m3	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	Type	Exposure	Test endpoint	Test result
Quartz (14808-60-7), surface modified with	None		Data not available or insufficient for			N/A

silsesquioxanes, methyl, ethoxy-terminated (CAS 104780-78-1), bulk material			classification			
Vinyl-polydimethyl siloxane	68083-19-2		Data not available or insufficient for classification			N/A
Dimethyl methyl hydrogen silicone fluid	68037-59-2		Data not available or insufficient for classification			N/A
Paraffin oils	8012-95-1		Data not available or insufficient for classification			N/A
Aluminium oxide	1344-28-1	Fish	Experimental	96 hours	LC50	>100 mg/l
Aluminium oxide	1344-28-1	Green Algae	Experimental	72 hours	EC50	>100 mg/l
Aluminium oxide	1344-28-1	Water flea	Experimental	48 hours	LC50	>100 mg/l
Aluminium oxide	1344-28-1	Green Algae	Experimental	72 hours	NOEC	>100 mg/l
Chromium (III) oxide	1308-38-9	Green algae	Estimated	72 hours	No tox obs at lmt of water sol	>100 mg/l
Chromium (III) oxide	1308-38-9	Water flea	Estimated	48 hours	No tox obs at lmt of water sol	>100 mg/l
Chromium (III) oxide	1308-38-9	Zebra Fish	Experimental	96 hours	No tox obs at lmt of water sol	>100 mg/l
Chromium (III) oxide	1308-38-9	Green algae	Estimated	72 hours	No tox obs at lmt of water sol	>100 mg/l
Chromium (III) oxide	1308-38-9	Water flea	Estimated	21 days	No tox obs at lmt of water sol	>100 mg/l
Chromium (III) oxide	1308-38-9	Zebra Fish	Estimated	30 days	No tox obs at lmt of water sol	>100 mg/l

12.2. Persistence and degradability

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Quartz (14808-60-7), surface modified with silsesquioxanes, methyl, ethoxy-terminated (CAS 104780-78-1), bulk material	None	Data not available-insufficient			N/A	
Vinyl-polydimethyl	68083-19-2	Data not available-			N/A	

siloxane		insufficient				
Dimethyl methyl hydrogen silicone fluid	68037-59-2	Data not available-insufficient			N/A	
Paraffin oils	8012-95-1	Estimated Biodegradation	28 days	CO2 evolution	10 % weight	OECD 301B - Modified sturm or CO2
Aluminium oxide	1344-28-1	Data not available-insufficient			N/A	
Chromium (III) oxide	1308-38-9	Data not available-insufficient			N/A	

12.3 : Bioaccumulative potential

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Quartz (14808-60-7), surface modified with silsesquioxanes , methyl, ethoxy-terminated (CAS 104780-78-1), bulk material	None	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Vinyl-polydimethyl siloxane	68083-19-2	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
Paraffin oils	8012-95-1	Estimated Bioconcentration		Bioaccumulation factor	1700	Estimated: Bioconcentration factor
Aluminium oxide	1344-28-1	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Chromium (III) oxide	1308-38-9	Estimated BCF - Other		Bioaccumulation factor	800	Non-standard method

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