



Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the SS586 Specification for Hazard Communication for Hazardous Chemicals and Dangerous Goods.

Document group:	32-4976-0	Version number:	1.01
Issue Date:	26/02/2020	Supersedes date:	17/05/2018

IDENTIFICATION

1.1. Product identifier

3M™ ESPE™ IMPRINT™ 4 HEAVY Intro Kit

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 Technologies (S) Pte Ltd,10 Ang Mo Kio Street 65, Singapore 569059
Telephone: +65 6450 8888
Website: www.3m.com.sg

1.4. Emergency telephone number

Company Emergency Hotline: +65 6591 6888 (8.15am - 5.00pm, Monday - Friday)

This product is a kit or a multipart product which consists of multiple, independently packaged components. An SDS for each of these components is included. Please do not separate the component SDSs from this cover page. The document numbers of the SDSs for components of this product are:

31-4882-2, 31-4872-3, 31-4841-8, 35-4552-2, 31-4863-2, 31-4879-8, 31-4838-4

TRANSPORT INFORMATION

International Regulations

UN No.: None assigned

UN Proper shipping name: None assigned

Transportation Class (IMO): None assigned

Transportation Class (IATA): None assigned

Other Dangerous Goods Descriptions (IMO): None assigned

Other Dangerous Goods Descriptions (IATA): None assigned

Packing Group: None assigned

Marine pollutant: None assigned

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 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.

3M Singapore SDSs are available at www.3m.com.sg



Safety Data Sheet

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Document group:	31-4882-2	Version number:	2.00
Issue Date:	28/08/2024	Supersedes date:	18/02/2020

SECTION 1: Identification

1.1. Product identifier

3M™ Imprint™ 4 Regular 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 Technologies (S) Pte Ltd, 10 Ang Mo Kio Street 65, Singapore 569059
Telephone: +65 6450 8888
Website: www.3m.com.sg

1.4. Emergency telephone number

+65 6591 6601 (8.15am - 5.00pm, Monday - Friday)

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

This product is not classified as hazardous per GHS criteria as implemented by Singapore Standard SS586: 2022.

2.2. Label elements

SIGNAL WORD

Not applicable.

Symbols

Not applicable

Pictograms

Not applicable

2.3. Other hazards

None known.

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	CAS Nbr	% by Wt
VINYL-POLYDIMETHYLSILOXANE	68083-19-2	40 - 60
Cristobalite	14464-46-1	25 - 45
Poly(dimethylsiloxane)	63148-62-9	1 - 10
SILANE TREATED SILICA	67762-90-7	1 - 10
3,3'-[(2-Methyl-1,3-phenylene)diimino]bis[4,5,6,7-tetrachloro-1H-isoindol-1-one]	5045-40-9	< 2

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

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. 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

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 fraction):0.025 mg/m ³	A2: Suspected human carcin.
Cristobalite	14464-46-1	Singapore PELs	TWA(as respirable dust)(8 hours):0.05 mg/m ³	

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

Singapore PELs : Singapore. Workplace Safety and Health (Permissible Exposure Levels of Toxic Substances) Order

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

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.

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
Color	White
Odor	Characteristic Odor, Slight Odor
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	Not applicable.
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	1.2 g/cm ³ - 1.4 g/cm ³
Relative density	1.2 - 1.4 [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>
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>
Molecular weight	<i>Not applicable.</i>

Particle Characteristics	<i>Not applicable.</i>
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SECTION 10: Stability and reactivity**10.1 Reactivity**

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

10.2 Chemical stability

Stable.

10.3 Possibility of hazardous reactions

Hazardous polymerisation will not occur.

10.4 Conditions to avoid

Heat.

10.5 Incompatible materials

Amines.

Strong acids.

Strong bases.

Strong oxidising agents.

10.6 Hazardous decomposition products**Substance****Condition**

None known.

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

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

11.1 Information on Toxicological effects**Signs and Symptoms of Exposure**

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

Inhalation

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.

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
VINYL-POLYDIMETHYLSILOXANE	Dermal	Rabbit	LD50 > 15,440 mg/kg

VINYL-POLYDIMETHYLSILOXANE	Ingestion	Rat	LD50 > 15,440 mg/kg
Cristobalite	Dermal		LD50 estimated to be > 5,000 mg/kg
Cristobalite	Ingestion		LD50 estimated to be > 5,000 mg/kg
SILANE TREATED SILICA	Dermal	Rabbit	LD50 > 5,000 mg/kg
SILANE TREATED SILICA	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
SILANE TREATED SILICA	Ingestion	Rat	LD50 > 5,110 mg/kg
Poly(dimethylsiloxane)	Dermal	Rabbit	LD50 > 19,400 mg/kg
Poly(dimethylsiloxane)	Ingestion	Rat	LD50 > 17,000 mg/kg
3,3'-(2-Methyl-1,3-phenylene)diimino]bis[4,5,6,7-tetrachloro-1H-isoindol-1-one]	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 1.04 mg/l
3,3'-(2-Methyl-1,3-phenylene)diimino]bis[4,5,6,7-tetrachloro-1H-isoindol-1-one]	Ingestion	Rat	LD50 > 5,000 mg/kg
3,3'-(2-Methyl-1,3-phenylene)diimino]bis[4,5,6,7-tetrachloro-1H-isoindol-1-one]	Dermal	similar health hazards	LD50 estimated to be > 5,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
VINYL-POLYDIMETHYLSILOXANE	Rabbit	No significant irritation
Cristobalite	Professional judgement	No significant irritation
SILANE TREATED SILICA	Rabbit	No significant irritation
Poly(dimethylsiloxane)	Rabbit	No significant irritation
3,3'-(2-Methyl-1,3-phenylene)diimino]bis[4,5,6,7-tetrachloro-1H-isoindol-1-one]	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
VINYL-POLYDIMETHYLSILOXANE	Rabbit	Mild irritant
SILANE TREATED SILICA	Rabbit	No significant irritation
Poly(dimethylsiloxane)	Rabbit	No significant irritation
3,3'-(2-Methyl-1,3-phenylene)diimino]bis[4,5,6,7-tetrachloro-1H-isoindol-1-one]	Rabbit	No significant irritation

Sensitization:

Skin Sensitisation

Name	Species	Value
SILANE TREATED SILICA	Human and animal	Not classified
3,3'-(2-Methyl-1,3-phenylene)diimino]bis[4,5,6,7-tetrachloro-1H-isoindol-1-one]	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
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

SILANE TREATED SILICA	In Vitro	Not mutagenic
3,3'-(2-Methyl-1,3-phenylene)diimino]bis[4,5,6,7-tetrachloro-1H-isoindol-1-one]	In Vitro	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Cristobalite	Inhalation	Human and animal	Carcinogenic.
SILANE TREATED SILICA	Not specified.	Mouse	Some positive data exist, but the data are not sufficient for classification

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

Name	Route	Value	Species	Test result	Exposure Duration
SILANE TREATED SILICA	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
SILANE TREATED SILICA	Ingestion	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
SILANE TREATED 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.

Specific Target Organ Toxicity - repeated exposure

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
SILANE TREATED SILICA	Inhalation	respiratory system silicosis	Not classified	Human	NOAEL Not available	occupational exposure

Aspiration Hazard

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

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information

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

12.1. Toxicity**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 Nbr	Organism	Type	Exposure	Test endpoint	Test result
VINYL-POLYDIMETHYL SILOXANE	68083-19-2	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Cristobalite	14464-46-1	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Poly(dimethylsiloxane)	63148-62-9	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
SILANE TREATED SILICA	67762-90-7	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
3,3'-[(2-Methyl-1,3-phenylene)diimino]bis[4,5,6,7-tetrachloro-1H-isoindol-1-one]	5045-40-9	Green algae	Analogous Compound	72 hours	EL50	>100 mg/l
3,3'-[(2-Methyl-1,3-phenylene)diimino]bis[4,5,6,7-tetrachloro-1H-isoindol-1-one]	5045-40-9	Water flea	Analogous Compound	48 hours	EL50	>100 mg/l
3,3'-[(2-Methyl-1,3-phenylene)diimino]bis[4,5,6,7-tetrachloro-1H-isoindol-1-one]	5045-40-9	Zebra Fish	Analogous Compound	96 hours	LC50	>100 mg/l
3,3'-[(2-Methyl-1,3-phenylene)diimino]bis[4,5,6,7-tetrachloro-1H-isoindol-1-one]	5045-40-9	Green algae	Analogous Compound	72 hours	NOEL	100 mg/l

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
VINYL-POLYDIMETHYL SILOXANE	68083-19-2	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
Poly(dimethylsiloxane)	63148-62-9	Data not available-insufficient	N/A	N/A	N/A	N/A
SILANE TREATED SILICA	67762-90-7	Data not available-insufficient	N/A	N/A	N/A	N/A
3,3'-[(2-Methyl-1,3-phenylene)diimino]bis[4,5,6,7-tetrachloro-1H-isoindol-1-one]	5045-40-9	Modeled Biodegradation	28 days	BOD	5 %BOD/ThOD	Catalogic™

12.3 : Bioaccumulative potential

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
VINYL-POLYDIMETHYL SILOXANE	68083-19-2	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
Poly(dimethylsiloxane)	63148-62-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
SILANE TREATED SILICA	67762-90-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
3,3'-[(2-Methyl-1,3-phenylene)diimino]bis[4,5,6,7-tetrachloro-1H-isoindol-1-one]	5045-40-9	Modeled Bioconcentration		Bioaccumulation factor	7.4	Catalogic™

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**International Regulations**

UN No.: None assigned

UN Proper shipping name: None assigned

Transportation Class (IMO): None assigned

Transportation Class (IATA): None assigned

Other Dangerous Goods Descriptions (IMO): None assigned

Other Dangerous Goods Descriptions (IATA): None assigned

Packing Group: None assigned

Marine pollutant: None assigned

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****Global inventory status**

Contact 3M for more information. The components of this product are in compliance with the new substance notification

requirements of CEPA. This product complies with Measures on Environmental Management of New Chemical Substances. All ingredients are listed on or exempt from on China IECSC inventory.

This product may contain component(s) that are regulated by the following:

Workplace Safety and Health Act & Workplace Safety and Health (General Provisions) Regulations: this product is subject to SDS, labelling, PEL and other requirements in the Act/Regulations.

Fire Safety (Petroleum and Flammable Materials) Regulations: This product is subject to the requirements in the Regulations

SECTION 16: Other information

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 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.

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Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the SS586 Specification for Hazard Communication for Hazardous Chemicals and Dangerous Goods.

Document group:	31-4879-8	Version number:	2.00
Issue Date:	28/08/2024	Supersedes date:	18/02/2020

SECTION 1: Identification

1.1. Product identifier

3M™ Imprint™ 4 Regular 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 Technologies (S) Pte Ltd, 10 Ang Mo Kio Street 65, Singapore 569059
Telephone: +65 6450 8888
Website: www.3m.com.sg

1.4. Emergency telephone number

+65 6591 6601 (8.15am - 5.00pm, Monday - Friday)

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

This product is not classified as hazardous per GHS criteria as implemented by Singapore Standard SS586: 2022.

2.2. Label elements

SIGNAL WORD

Not applicable.

Symbols

Not applicable

Pictograms

Not applicable

2.3. Other hazards

None known.

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	CAS Nbr	% by Wt
VINYL-POLYDIMETHYL SILOXANE	68083-19-2	30 - 50
Cristobalite	14464-46-1	20 - 30
Dimethyl methyl hydrogen silicone fluid	68037-59-2	10 - 20
POLYALKYLENEOXIDE MODIFIED HEPTAMETHYLTRISILOXANE	27306-78-1	1 - 10
SILANE TREATED SILICA	67762-90-7	1 - 10
ALLYLTRIMETHYLSILANE	762-72-1	< 5
FLUORINATED POLYETHER	Trade Secret	1 - 5
Quartz	14808-60-7	< 0.5

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

No need for first aid is anticipated. If symptoms develop, remove the affected person to fresh air. 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.
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. 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
Cristobalite	14464-46-1	ACGIH	TWA(respirable fraction):0.025 mg/m ³	A2: Suspected human carcin.
Cristobalite	14464-46-1	Singapore PELs	TWA(as respirable dust)(8 hours):0.05 mg/m ³	
Quartz	14808-60-7	ACGIH	TWA(respirable fraction):0.025 mg/m ³	A2: Suspected human carcin.
Quartz	14808-60-7	Singapore PELs	TWA(as respirable dust)(8 hours):0.1 mg/m ³	

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

Singapore PELs : Singapore. Workplace Safety and Health (Permissible Exposure Levels of Toxic Substances) Order

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

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.

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
Color	White
Odor	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	Not applicable.
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	1.1 g/cm ³ - 1.3 g/cm ³
Relative density	1.1 - 1.3 [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>
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>
Molecular weight	<i>Not applicable.</i>

Particle Characteristics	<i>Not applicable.</i>
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SECTION 10: Stability and reactivity**10.1 Reactivity**

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

10.2 Chemical stability

Stable.

10.3 Possibility of hazardous reactions

Hazardous polymerisation will not occur.

10.4 Conditions to avoid

Heat.

10.5 Incompatible materials

Amines.

Strong acids.

Strong bases.

Strong oxidising agents.

10.6 Hazardous decomposition products

<u>Substance</u>	<u>Condition</u>
None known.	

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

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

11.1 Information on Toxicological effects

Signs and Symptoms of Exposure

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

Inhalation

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.

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	Dermal		No data available; calculated ATE >5,000 mg/kg
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
VINYL-POLYDIMETHYL SILOXANE	Dermal	Rabbit	LD50 > 15,440 mg/kg
VINYL-POLYDIMETHYL SILOXANE	Ingestion	Rat	LD50 > 15,440 mg/kg
Cristobalite	Dermal		LD50 estimated to be > 5,000 mg/kg
Cristobalite	Ingestion		LD50 estimated to be > 5,000 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
SILANE TREATED SILICA	Dermal	Rabbit	LD50 > 5,000 mg/kg
SILANE TREATED SILICA	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
SILANE TREATED SILICA	Ingestion	Rat	LD50 > 5,110 mg/kg
POLYALKYLENEOXIDE MODIFIED HEPTAMETHYLTRISILOXANE	Inhalation-Vapor	Professional judgement	LC50 estimated to be 10 - 20 mg/l
POLYALKYLENEOXIDE MODIFIED HEPTAMETHYLTRISILOXANE	Dermal	Rat	LD50 > 2,000 mg/kg
POLYALKYLENEOXIDE MODIFIED HEPTAMETHYLTRISILOXANE	Inhalation-Dust/Mist (4 hours)	Rat	LC50 2 mg/l
POLYALKYLENEOXIDE MODIFIED HEPTAMETHYLTRISILOXANE	Ingestion	Rat	LD50 > 2,000 mg/kg
ALLYLTRIMETHYLSILANE	Dermal	Professional judgement	LD50 estimated to be 2,000 - 5,000 mg/kg
ALLYLTRIMETHYLSILANE	Ingestion	similar compounds	LD50 estimated to be 2,000 - 5,000 mg/kg
FLUORINATED POLYETHER	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
FLUORINATED POLYETHER	Ingestion	Rat	LD50 > 1,000 mg/kg
Quartz	Dermal		LD50 estimated to be > 5,000 mg/kg
Quartz	Ingestion		LD50 estimated to be > 5,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
VINYL-POLYDIMETHYL SILOXANE	Rabbit	No significant irritation
Cristobalite	Professional judgement	No significant irritation
Dimethyl methyl hydrogen silicone fluid	Rabbit	No significant irritation
SILANE TREATED SILICA	Rabbit	No significant irritation
POLYALKYLENEOXIDE MODIFIED HEPTAMETHYLTRISILOXANE	Rabbit	No significant irritation
ALLYLTRIMETHYLSILANE	Not available	Irritant
Quartz	Professional judgement	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value

VINYL-POLYDIMETHYL SILOXANE	Rabbit	Mild irritant
Dimethyl methyl hydrogen silicone fluid	Rabbit	Mild irritant
SILANE TREATED SILICA	Rabbit	No significant irritation
POLYALKYLENEOXIDE MODIFIED HEPTAMETHYLTRISILOXANE	Rabbit	Severe irritant
ALLYLTRIMETHYLSILANE	Not available	Severe irritant

Sensitization:**Skin Sensitisation**

Name	Species	Value
Dimethyl methyl hydrogen silicone fluid	Guinea pig	Not classified
SILANE TREATED SILICA	Human and animal	Not classified
POLYALKYLENEOXIDE MODIFIED HEPTAMETHYLTRISILOXANE	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
Dimethyl methyl hydrogen silicone fluid	In Vitro	Not mutagenic
SILANE TREATED SILICA	In Vitro	Not mutagenic
POLYALKYLENEOXIDE MODIFIED HEPTAMETHYLTRISILOXANE	In Vitro	Not mutagenic
POLYALKYLENEOXIDE MODIFIED HEPTAMETHYLTRISILOXANE	In vivo	Not mutagenic
ALLYLTRIMETHYLSILANE	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
Cristobalite	Inhalation	Human and animal	Carcinogenic.
SILANE TREATED 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
SILANE TREATED SILICA	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
SILANE TREATED SILICA	Ingestion	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
SILANE TREATED SILICA	Ingestion	Not classified for development	Rat	NOAEL	during

				1,350 mg/kg/day	organogenesis
POLYALKYLENEOXIDE MODIFIED HEPTAMETHYLTRISILOXANE	Ingestion	Not classified for female reproduction	Rat	NOAEL 450 mg/kg/day	premating into lactation
POLYALKYLENEOXIDE MODIFIED HEPTAMETHYLTRISILOXANE	Ingestion	Not classified for male reproduction	Rat	NOAEL 450 mg/kg/day	28 days
POLYALKYLENEOXIDE MODIFIED HEPTAMETHYLTRISILOXANE	Ingestion	Not classified for development	Rat	NOAEL 450 mg/kg/day	premating into lactation
FLUORINATED POLYETHER	Ingestion	Not classified for reproduction and/or development	Rat	NOAEL 1,000 mg/kg/day	premating into lactation
FLUORINATED POLYETHER	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	premating into lactation
FLUORINATED POLYETHER	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	premating into lactation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
POLYALKYLENEOXIDE MODIFIED HEPTAMETHYLTRISILOXANE	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	
ALLYLTRIMETHYLSILANE	Inhalation	respiratory irritation	May cause respiratory irritation	Not available	NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

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
SILANE TREATED SILICA	Inhalation	respiratory system silicosis	Not classified	Human	NOAEL Not available	occupational exposure
POLYALKYLENEOXIDE MODIFIED HEPTAMETHYLTRISILOXANE	Dermal	skin	Not classified	Rat	NOAEL 1,551 mg/kg/day	9 days
POLYALKYLENEOXIDE MODIFIED HEPTAMETHYLTRISILOXANE	Inhalation	respiratory system	Not classified	Rat	NOAEL 0.025 mg/l	9 days
POLYALKYLENEOXIDE MODIFIED HEPTAMETHYLTRISILOXANE	Ingestion	endocrine system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 110 mg/kg/day	90 days
POLYALKYLENEOXIDE MODIFIED HEPTAMETHYLTRISILOXANE	Ingestion	liver kidney and/or bladder heart gastrointestinal tract hematopoietic system nervous system respiratory system	Not classified	Rat	NOAEL 1,000 mg/kg/day	90 days
FLUORINATED POLYETHER	Ingestion	auditory system heart endocrine system hematopoietic system liver immune system muscles nervous system eyes	Not classified	Rat	NOAEL 1,000 mg/kg/day	28 days
Quartz	Inhalation	silicosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure

Aspiration Hazard

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

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information

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

12.1. Toxicity**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 Nbr	Organism	Type	Exposure	Test endpoint	Test result
VINYL-POLYDIMETHYL SILOXANE	68083-19-2	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Cristobalite	14464-46-1	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Dimethyl methyl hydrogen silicone fluid	68037-59-2	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
POLYALKYLENE OXIDE MODIFIED HEPTAMETHYL TRISILOXANE	27306-78-1	Green algae	Estimated	96 hours	EC50	32 mg/l
POLYALKYLENE OXIDE MODIFIED HEPTAMETHYL TRISILOXANE	27306-78-1	Rainbow trout	Estimated	96 hours	LC50	4.5 mg/l
POLYALKYLENE OXIDE MODIFIED HEPTAMETHYL TRISILOXANE	27306-78-1	Water flea	Estimated	48 hours	LC50	23.4 mg/l
SILANE TREATED SILICA	67762-90-7	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
ALLYLTRIMETH YLSILANE	762-72-1	Green algae	Experimental	72 hours	ErC50	>1 mg/l
ALLYLTRIMETH YLSILANE	762-72-1	Water flea	Experimental	48 hours	EC50	1.6 mg/l
ALLYLTRIMETH YLSILANE	762-72-1	Green algae	Estimated	72 hours	ErC10	1.1 mg/l
FLUORINATED POLYETHER	Trade Secret	N/A	Data not available or insufficient for classification	N/A	N/A	N/A

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 Nbr	Test type	Duration	Study Type	Test result	Protocol
VINYL-POLYDIMETHYL SILOXANE	68083-19-2	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
Dimethyl methyl hydrogen silicone fluid	68037-59-2	Data not available-insufficient	N/A	N/A	N/A	N/A
POLYALKYLENE OXIDE MODIFIED HEPTAMETHYL TRISILOXANE	27306-78-1	Modeled Biodegradation	28 days	BOD	1 %BOD/ThOD	Catalogic™
SILANE TREATED SILICA	67762-90-7	Data not available-insufficient	N/A	N/A	N/A	N/A
ALLYLTRIMETH YLSILANE	762-72-1	Experimental Biodegradation	28 days	BOD	10 %BOD/ThOD	OECD 301F - Manometric respirometry
FLUORINATED POLYETHER	Trade Secret	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 Nbr	Test type	Duration	Study Type	Test result	Protocol
VINYL-POLYDIMETHYL SILOXANE	68083-19-2	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
Dimethyl methyl hydrogen silicone fluid	68037-59-2	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
POLYALKYLENE OXIDE MODIFIED HEPTAMETHYL TRISILOXANE	27306-78-1	Modeled Bioconcentration		Bioaccumulation factor	331	Catalogic™
SILANE TREATED SILICA	67762-90-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
ALLYLTRIMETH YLSILANE	762-72-1	Modeled Bioconcentration		Bioaccumulation factor	220	Catalogic™
ALLYLTRIMETH YLSILANE	762-72-1	Experimental Bioconcentration		Log Kow	4.64	OECD 117 log Kow HPLC method
FLUORINATED POLYETHER	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Quartz	14808-60-7	Data not available	N/A	N/A	N/A	N/A

		or insufficient for classification				
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12.4. Mobility in soil

Please contact manufacturer for more details

12.5 Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Disposal methods

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

Prior to disposal, consult all applicable authorities and regulations to insure proper classification. 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

International Regulations

UN No.: None assigned

UN Proper shipping name: None assigned

Transportation Class (IMO): None assigned

Transportation Class (IATA): None assigned

Other Dangerous Goods Descriptions (IMO): None assigned

Other Dangerous Goods Descriptions (IATA): None assigned

Packing Group: None assigned

Marine pollutant: None assigned

SECTION 15: Regulatory information

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

Global inventory status

Contact 3M for more information. The components of this product are in compliance with the new substance notification requirements of CEPA. This product complies with Measures on Environmental Management of New Chemical Substances. All ingredients are listed on or exempt from on China IECSC inventory.

This product may contain component(s) that are regulated by the following:

Workplace Safety and Health Act & Workplace Safety and Health (General Provisions) Regulations: this product is subject to SDS, labelling, PEL and other requirements in the Act/Regulations.

Fire Safety (Petroleum and Flammable Materials) Regulations: This product is subject to the requirements in the Regulations

SECTION 16: Other information

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 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.

3M Singapore SDSs are available at www.3m.com.sg



Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the SS586 Specification for Hazard Communication for Hazardous Chemicals and Dangerous Goods.

Document group:	31-4872-3	Version number:	3.00
Issue Date:	28/08/2024	Supersedes date:	20/03/2024

SECTION 1: Identification

1.1. Product identifier

3M™ IMPRINT™ 4 LIGHT Catalyst

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 Technologies (S) Pte Ltd, 10 Ang Mo Kio Street 65, Singapore 569059
Telephone: +65 6450 8888
Website: www.3m.com.sg

1.4. Emergency telephone number

+65 6591 6601 (8.15am - 5.00pm, Monday - Friday)

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

This product is not classified as hazardous per GHS criteria as implemented by Singapore Standard SS586: 2022.

2.2. Label elements

SIGNAL WORD

Not applicable.

Symbols

Not applicable

Pictograms

Not applicable

2.3. Other hazards

None known.

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	CAS Nbr	% by Wt
VINYL-POLYDIMETHYLSILOXANE	68083-19-2	40 - 60
Cristobalite	14464-46-1	20 - 40
Poly(dimethylsiloxane)	63148-62-9	1 - 10
SILANE TREATED SILICA	67762-90-7	1 - 10

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.
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. 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

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 fraction):0.025 mg/m3	A2: Suspected human carcin.
Cristobalite	14464-46-1	Singapore PELs	TWA(as respirable dust)(8 hours):0.05 mg/m3	

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

Singapore PELs : Singapore. Workplace Safety and Health (Permissible Exposure Levels of Toxic Substances) Order

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

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.

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
Color	Pink
Odor	Characteristic Odor, Slight Odor
Odour threshold	<i>No data available.</i>
pH	<i>No data available.</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>No data available.</i>
Flammability	Not applicable.
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	1.2 g/cm ³ - 1.4 g/cm ³
Relative density	1.2 - 1.4 [Ref Std:WATER=1]
Water solubility	Negligible
Solubility- non-water	<i>No data available.</i>
Partition coefficient: n-octanol/water	<i>Not applicable.</i>
Autoignition temperature	<i>No data available.</i>
Decomposition temperature	<i>No data available.</i>
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>
Molecular weight	<i>Not applicable.</i>

Particle Characteristics	<i>Not applicable.</i>
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SECTION 10: Stability and reactivity**10.1 Reactivity**

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

10.2 Chemical stability

Stable.

10.3 Possibility of hazardous reactions

Hazardous polymerisation will not occur.

10.4 Conditions to avoid

Heat.

10.5 Incompatible materials

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

10.6 Hazardous decomposition products**Substance****Condition**

None known.

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

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

11.1 Information on Toxicological effects**Signs and Symptoms of Exposure**

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

Inhalation

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.

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
VINYL-POLYDIMETHYLSILOXANE	Dermal	Rabbit	LD50 > 15,440 mg/kg
VINYL-POLYDIMETHYLSILOXANE	Ingestion	Rat	LD50 > 15,440 mg/kg
Cristobalite	Dermal		LD50 estimated to be > 5,000 mg/kg
Cristobalite	Ingestion		LD50 estimated to be > 5,000 mg/kg

SILANE TREATED SILICA	Dermal	Rabbit	LD50 > 5,000 mg/kg
SILANE TREATED SILICA	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
SILANE TREATED SILICA	Ingestion	Rat	LD50 > 5,110 mg/kg
Poly(dimethylsiloxane)	Dermal	Rabbit	LD50 > 19,400 mg/kg
Poly(dimethylsiloxane)	Ingestion	Rat	LD50 > 17,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
VINYL-POLYDIMETHYLSILOXANE	Rabbit	No significant irritation
Cristobalite	Professional judgement	No significant irritation
SILANE TREATED SILICA	Rabbit	No significant irritation
Poly(dimethylsiloxane)	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
VINYL-POLYDIMETHYLSILOXANE	Rabbit	Mild irritant
SILANE TREATED SILICA	Rabbit	No significant irritation
Poly(dimethylsiloxane)	Rabbit	No significant irritation

Sensitization:

Skin Sensitisation

Name	Species	Value
SILANE TREATED 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
SILANE TREATED SILICA	In Vitro	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Cristobalite	Inhalation	Human and animal	Carcinogenic.
SILANE TREATED SILICA	Not specified.	Mouse	Some positive data exist, but the data are not sufficient for classification

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
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SILANE TREATED SILICA	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
SILANE TREATED SILICA	Ingestion	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
SILANE TREATED 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.

Specific Target Organ Toxicity - repeated exposure

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
SILANE TREATED SILICA	Inhalation	respiratory system silicosis	Not classified	Human	NOAEL Not available	occupational exposure

Aspiration Hazard

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

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information

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

12.1. Toxicity

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 Nbr	Organism	Type	Exposure	Test endpoint	Test result
VINYL-POLYDIMETHYL SILOXANE	68083-19-2	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Cristobalite	14464-46-1	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Poly(dimethylsiloxane)	63148-62-9	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
SILANE TREATED SILICA	67762-90-7	N/A	Data not available or insufficient for classification	N/A	N/A	N/A

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
VINYL-POLYDIMETHYL SILOXANE	68083-19-2	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
Poly(dimethylsiloxane)	63148-62-9	Data not available-insufficient	N/A	N/A	N/A	N/A
SILANE TREATED SILICA	67762-90-7	Data not available-insufficient	N/A	N/A	N/A	N/A

12.3 : Bioaccumulative potential

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
VINYL-POLYDIMETHYL SILOXANE	68083-19-2	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
Poly(dimethylsiloxane)	63148-62-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
SILANE TREATED SILICA	67762-90-7	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

International Regulations

UN No.: None assigned

UN Proper shipping name: None assigned

Transportation Class (IMO): None assigned

Transportation Class (IATA): None assigned

Other Dangerous Goods Descriptions (IMO): None assigned
Other Dangerous Goods Descriptions (IATA): None assigned
Packing Group: None assigned
Marine pollutant: None assigned

SECTION 15: Regulatory information

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

Global inventory status

Contact 3M for more information. The components of this product are in compliance with the new substance notification requirements of CEPA. This product complies with Measures on Environmental Management of New Chemical Substances. All ingredients are listed on or exempt from on China IECSC inventory.

This product may contain component(s) that are regulated by the following:

Workplace Safety and Health Act & Workplace Safety and Health (General Provisions) Regulations: this product is subject to SDS, labelling, PEL and other requirements in the Act/Regulations.

Fire Safety (Petroleum and Flammable Materials) Regulations: This product is subject to the requirements in the Regulations

SECTION 16: Other information

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 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.

3M Singapore SDSs are available at www.3m.com.sg



Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the SS586 Specification for Hazard Communication for Hazardous Chemicals and Dangerous Goods.

Document group:	31-4863-2	Version number:	3.00
Issue Date:	30/08/2024	Supersedes date:	20/03/2024

SECTION 1: Identification

1.1. Product identifier

3M™ Imprint™ 4 Light 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 Technologies (S) Pte Ltd, 10 Ang Mo Kio Street 65, Singapore 569059
Telephone: +65 6450 8888
Website: www.3m.com.sg

1.4. Emergency telephone number

+65 6591 6601 (8.15am - 5.00pm, Monday - Friday)

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

This product is not classified as hazardous per GHS criteria as implemented by Singapore Standard SS586: 2022.

2.2. Label elements

SIGNAL WORD

Not applicable.

Symbols

Not applicable

Pictograms

Not applicable

2.3. Other hazards

Specific target org tox. class. not applied, no potential inhal. expo. The silicosis target organ toxicity classification is not

applied because there is no potential for inhalation exposure.

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	CAS Nbr	% by Wt
Cristobalite	14464-46-1	20 - 40
VINYL-POLYDIMETHYL SILOXANE	68083-19-2	30 - 40
Dimethyl methyl hydrogen silicone fluid	68037-59-2	10 - 20
SILANE TREATED SILICA	67762-90-7	1 - 10
ALLYLTRIMETHYLSILANE	762-72-1	< 5
FLUORINATED POLYETHER	Trade Secret	< 5
Poly(oxy-1,2-ethanediyl), .alpha.-methyl-.omega.-[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propoxy]-	27306-78-1	< 5
Quartz	14808-60-7	< 0.5

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation

No need for first aid is anticipated. If symptoms develop, remove the affected person to fresh air. 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.
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. 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 release to the environment. 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
Cristobalite	14464-46-1	ACGIH	TWA(respirable fraction):0.025 mg/m ³	A2: Suspected human carcin.
Cristobalite	14464-46-1	Singapore PELs	TWA(as respirable dust)(8 hours):0.05 mg/m ³	
Quartz	14808-60-7	ACGIH	TWA(respirable fraction):0.025 mg/m ³	A2: Suspected human carcin.
Quartz	14808-60-7	Singapore PELs	TWA(as respirable dust)(8 hours):0.1 mg/m ³	

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

Singapore PELs : Singapore. Workplace Safety and Health (Permissible Exposure Levels of Toxic Substances) Order

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

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.

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
Color	White
Odor	Minty
Odour threshold	<i>No data available.</i>
pH	<i>No data available.</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>No data available.</i>
Flammability	Not applicable.
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	1.1 g/cm ³ - 1.3 g/cm ³
Relative density	1.1 - 1.3 [Ref Std:WATER=1]
Water solubility	Negligible
Solubility- non-water	<i>No data available.</i>
Partition coefficient: n-octanol/water	<i>Not applicable.</i>
Autoignition temperature	<i>No data available.</i>
Decomposition temperature	<i>No data available.</i>
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>
Molecular weight	<i>Not applicable.</i>

Particle Characteristics	<i>Not applicable.</i>
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SECTION 10: Stability and reactivity**10.1 Reactivity**

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

10.2 Chemical stability

Stable.

10.3 Possibility of hazardous reactions

Hazardous polymerisation will not occur.

10.4 Conditions to avoid

Heat.

10.5 Incompatible materials

Amines.

Strong acids.

Strong bases.

Strong oxidising agents.

10.6 Hazardous decomposition products

<u>Substance</u>	<u>Condition</u>
None known.	

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

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

11.1 Information on Toxicological effects

Signs and Symptoms of Exposure

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

Inhalation

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.

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	Dermal		No data available; calculated ATE >5,000 mg/kg
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
VINYL-POLYDIMETHYL SILOXANE	Dermal	Rabbit	LD50 > 15,440 mg/kg
VINYL-POLYDIMETHYL SILOXANE	Ingestion	Rat	LD50 > 15,440 mg/kg
Cristobalite	Dermal		LD50 estimated to be > 5,000 mg/kg
Cristobalite	Ingestion		LD50 estimated to be > 5,000 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
SILANE TREATED SILICA	Dermal	Rabbit	LD50 > 5,000 mg/kg
SILANE TREATED SILICA	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
SILANE TREATED SILICA	Ingestion	Rat	LD50 > 5,110 mg/kg
Poly(oxy-1,2-ethanediyl), .alpha.-methyl-.omega.-[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propoxy]-	Inhalation-Vapor	Professional judgement	LC50 estimated to be 10 - 20 mg/l
Poly(oxy-1,2-ethanediyl), .alpha.-methyl-.omega.-[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propoxy]-	Dermal	Rat	LD50 > 2,000 mg/kg
Poly(oxy-1,2-ethanediyl), .alpha.-methyl-.omega.-[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propoxy]-	Inhalation-Dust/Mist (4 hours)	Rat	LC50 2 mg/l
Poly(oxy-1,2-ethanediyl), .alpha.-methyl-.omega.-[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propoxy]-	Ingestion	Rat	LD50 > 2,000 mg/kg
ALLYLTRIMETHYLSILANE	Dermal	Professional judgement	LD50 estimated to be 2,000 - 5,000 mg/kg
ALLYLTRIMETHYLSILANE	Ingestion	similar compounds	LD50 estimated to be 2,000 - 5,000 mg/kg
FLUORINATED POLYETHER	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
FLUORINATED POLYETHER	Ingestion	Rat	LD50 > 1,000 mg/kg
Quartz	Dermal		LD50 estimated to be > 5,000 mg/kg
Quartz	Ingestion		LD50 estimated to be > 5,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
VINYL-POLYDIMETHYL SILOXANE	Rabbit	No significant irritation
Cristobalite	Professional judgement	No significant irritation
Dimethyl methyl hydrogen silicone fluid	Rabbit	No significant irritation
SILANE TREATED SILICA	Rabbit	No significant irritation
Poly(oxy-1,2-ethanediyl), .alpha.-methyl-.omega.-[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propoxy]-	Rabbit	No significant irritation
ALLYLTRIMETHYLSILANE	Not available	Irritant
Quartz	Professional judgement	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
VINYL-POLYDIMETHYL SILOXANE	Rabbit	Mild irritant
Dimethyl methyl hydrogen silicone fluid	Rabbit	Mild irritant
SILANE TREATED SILICA	Rabbit	No significant irritation
Poly(oxy-1,2-ethanediyl), .alpha.-methyl-.omega.-[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propoxy]-	Rabbit	Severe irritant
ALLYLTRIMETHYLSILANE	Not available	Severe irritant

Sensitization:**Skin Sensitisation**

Name	Species	Value
Dimethyl methyl hydrogen silicone fluid	Guinea pig	Not classified
SILANE TREATED SILICA	Human and animal	Not classified
Poly(oxy-1,2-ethanediyl), .alpha.-methyl-.omega.-[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propoxy]-	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
Dimethyl methyl hydrogen silicone fluid	In Vitro	Not mutagenic
SILANE TREATED SILICA	In Vitro	Not mutagenic
Poly(oxy-1,2-ethanediyl), .alpha.-methyl-.omega.-[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propoxy]-	In Vitro	Not mutagenic
Poly(oxy-1,2-ethanediyl), .alpha.-methyl-.omega.-[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propoxy]-	In vivo	Not mutagenic
ALLYLTRIMETHYLSILANE	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
Cristobalite	Inhalation	Human and animal	Carcinogenic.
SILANE TREATED 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
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					Duration
SILANE TREATED SILICA	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
SILANE TREATED SILICA	Ingestion	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
SILANE TREATED SILICA	Ingestion	Not classified for development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
Poly(oxy-1,2-ethanediyl), .alpha.-methyl-.omega.-[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propoxy]-	Ingestion	Not classified for female reproduction	Rat	NOAEL 450 mg/kg/day	premating into lactation
Poly(oxy-1,2-ethanediyl), .alpha.-methyl-.omega.-[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propoxy]-	Ingestion	Not classified for male reproduction	Rat	NOAEL 450 mg/kg/day	28 days
Poly(oxy-1,2-ethanediyl), .alpha.-methyl-.omega.-[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propoxy]-	Ingestion	Not classified for development	Rat	NOAEL 450 mg/kg/day	premating into lactation
FLUORINATED POLYETHER	Ingestion	Not classified for reproduction and/or development	Rat	NOAEL 1,000 mg/kg/day	premating into lactation
FLUORINATED POLYETHER	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	premating into lactation
FLUORINATED POLYETHER	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	premating into lactation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Poly(oxy-1,2-ethanediyl), .alpha.-methyl-.omega.-[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propoxy]-	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	
ALLYLTRIMETHYLSILANE	Inhalation	respiratory irritation	May cause respiratory irritation	Not available	NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

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
SILANE TREATED SILICA	Inhalation	respiratory system silicosis	Not classified	Human	NOAEL Not available	occupational exposure
Poly(oxy-1,2-ethanediyl), .alpha.-methyl-.omega.-[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propoxy]-	Dermal	skin	Not classified	Rat	NOAEL 1,551 mg/kg/day	9 days
Poly(oxy-1,2-ethanediyl), .alpha.-methyl-.omega.-[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propoxy]-	Inhalation	respiratory system	Not classified	Rat	NOAEL 0.025 mg/l	9 days
Poly(oxy-1,2-ethanediyl), .alpha.-methyl-.omega.-[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propoxy]-	Ingestion	endocrine system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 110 mg/kg/day	90 days

Poly(oxy-1,2-ethanediyl), .alpha.-methyl-.omega.-[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propoxy]-	Ingestion	liver kidney and/or bladder heart gastrointestinal tract hematopoietic system nervous system respiratory system	Not classified	Rat	NOAEL 1,000 mg/kg/day	90 days
FLUORINATED POLYETHER	Ingestion	auditory system heart endocrine system hematopoietic system liver immune system muscles nervous system eyes	Not classified	Rat	NOAEL 1,000 mg/kg/day	28 days
Quartz	Inhalation	silicosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure

Aspiration Hazard

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

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information

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

12.1. Toxicity

Acute aquatic hazard:

GHS Acute 3: Harmful to aquatic life.

Chronic aquatic hazard:

GHS Chronic 3: Harmful to aquatic life with long lasting effects.

No product test data available.

Material	CAS Nbr	Organism	Type	Exposure	Test endpoint	Test result
Cristobalite	14464-46-1	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
VINYL-POLYDIMETHYL SILOXANE	68083-19-2	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Dimethyl methyl hydrogen silicone fluid	68037-59-2	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
SILANE TREATED SILICA	67762-90-7	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
ALLYLTRIMETH YLSILANE	762-72-1	Green algae	Experimental	72 hours	ErC50	>1 mg/l
ALLYLTRIMETH YLSILANE	762-72-1	Water flea	Experimental	48 hours	EC50	1.6 mg/l
ALLYLTRIMETH YLSILANE	762-72-1	Green algae	Estimated	72 hours	ErC10	1.1 mg/l
FLUORINATED	Trade Secret	N/A	Data not available	N/A	N/A	N/A

POLYETHER			or insufficient for classification			
Poly(oxy-1,2-ethanediyl), .alpha.-methyl-.omega.-[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propoxy]-	27306-78-1	Green algae	Estimated	96 hours	EC50	32 mg/l
Poly(oxy-1,2-ethanediyl), .alpha.-methyl-.omega.-[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propoxy]-	27306-78-1	Rainbow trout	Estimated	96 hours	LC50	4.5 mg/l
Poly(oxy-1,2-ethanediyl), .alpha.-methyl-.omega.-[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propoxy]-	27306-78-1	Water flea	Estimated	48 hours	LC50	23.4 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 Nbr	Test type	Duration	Study Type	Test result	Protocol
Cristobalite	14464-46-1	Data not available-insufficient	N/A	N/A	N/A	N/A
VINYL-POLYDIMETHYL SILOXANE	68083-19-2	Data not available-insufficient	N/A	N/A	N/A	N/A
Dimethyl methyl hydrogen silicone fluid	68037-59-2	Data not available-insufficient	N/A	N/A	N/A	N/A
SILANE TREATED SILICA	67762-90-7	Data not available-insufficient	N/A	N/A	N/A	N/A
ALLYLTRIMETH YLSILANE	762-72-1	Experimental Biodegradation	28 days	BOD	10 %BOD/ThOD	OECD 301F - Manometric respirometry
FLUORINATED POLYETHER	Trade Secret	Data not available-insufficient	N/A	N/A	N/A	N/A
Poly(oxy-1,2-ethanediyl), .alpha.-methyl-.omega.-[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propoxy]-	27306-78-1	Modeled Biodegradation	28 days	BOD	1 %BOD/ThOD	Catalogic™
Quartz	14808-60-7	Data not available-insufficient	N/A	N/A	N/A	N/A

12.3 : Bioaccumulative potential

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Cristobalite	14464-46-1	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
SILANE TREATED SILICA	67762-90-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
ALLYLTRIMETHYLSILANE	762-72-1	Modeled Bioconcentration		Bioaccumulation factor	220	Catalogic™
ALLYLTRIMETHYLSILANE	762-72-1	Experimental Bioconcentration		Log Kow	4.64	OECD 117 log Kow HPLC method
FLUORINATED POLYETHER	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Poly(oxy-1,2-ethanediy), .alpha.-methyl-.omega.-[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propoxy]-	27306-78-1	Modeled Bioconcentration		Bioaccumulation factor	331	Catalogic™
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 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**International Regulations**

UN No.: None assigned

UN Proper shipping name: None assigned

Transportation Class (IMO): None assigned

Transportation Class (IATA): None assigned

Other Dangerous Goods Descriptions (IMO): None assigned

Other Dangerous Goods Descriptions (IATA): None assigned

Packing Group: None assigned
Marine pollutant: None assigned

SECTION 15: Regulatory information

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

Global inventory status

Contact 3M for more information. The components of this product are in compliance with the new substance notification requirements of CEPA. This product complies with Measures on Environmental Management of New Chemical Substances. All ingredients are listed on or exempt from on China IECSC inventory.

This product may contain component(s) that are regulated by the following:

Workplace Safety and Health Act & Workplace Safety and Health (General Provisions) Regulations: this product is subject to SDS, labelling, PEL and other requirements in the Act/Regulations.

Fire Safety (Petroleum and Flammable Materials) Regulations: This product is subject to the requirements in the Regulations

SECTION 16: Other information

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 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.

3M Singapore SDSs are available at www.3m.com.sg



Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the SS586 Specification for Hazard Communication for Hazardous Chemicals and Dangerous Goods.

Document group:	35-4552-2	Version number:	3.00
Issue Date:	30/08/2024	Supersedes date:	20/03/2024

SECTION 1: Identification

1.1. Product identifier

3M™ VPS Tray Adhesive - New Formulation

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 Technologies (S) Pte Ltd,10 Ang Mo Kio Street 65, Singapore 569059
Telephone: +65 6450 8888
Website: www.3m.com.sg

1.4. Emergency telephone number

+65 6591 6601 (8.15am - 5.00pm, Monday - Friday)

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

Flammable Liquid: Category 2.

Specific Target Organ Toxicity (single exposure): Category 3.

2.2. Label elements

SIGNAL WORD

DANGER!

Symbols

Flame |Exclamation mark |

Pictograms

**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.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

Response:

P370 + P378 In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

2.3. Other hazards

None known.

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	CAS Nbr	% by Wt
Ethyl acetate	141-78-6	40 - 70
Dimethylsiloxane, hydroxy-terminated, reaction products with chlorotrimethylsilane, hydrochloric acid, propan-2-ol and sodium silicate	68440-70-0	40 - 60

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.

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 vapors 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	Singapore PELs	TWA(8 hours):1440 mg/m3(400 ppm)	

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

Singapore PELs : Singapore. Workplace Safety and Health (Permissible Exposure Levels of Toxic Substances) Order

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

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.

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	Liquid.
Specific Physical Form:	Viscous.
Color	Red
Odor	Characteristic Organic solvent
Odour threshold	<i>No data available.</i>
pH	<i>No data available.</i>
Melting point/Freezing point	<i>No data available.</i>
Boiling point/Initial boiling point/Boiling range	76.1 °C
Flash point	-3.9 °C [<i>Test Method:Closed Cup</i>]
Evaporation rate	<i>No data available.</i>
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: AIR=1</i>]
Density	± 0.9 g/cm ³
Relative density	> 0.9 [<i>Ref Std: WATER=1</i>]

Water solubility	Nil
Solubility- non-water	<i>No data available.</i>
Partition coefficient: n-octanol/water	<i>No data available.</i>
Autoignition temperature	<i>No data available.</i>
Decomposition temperature	<i>No data available.</i>
Kinematic Viscosity	278 mm ² /sec
Percent volatile	<i>No data available.</i>
Molecular weight	<i>No data available.</i>

Particle Characteristics	<i>Not applicable.</i>
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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 Possibility of hazardous reactions

Hazardous polymerisation will not occur.

10.4 Conditions to avoid

Sparks and/or flames.

Heat.

10.5 Incompatible materials

None known.

10.6 Hazardous decomposition products

Substance

Carbon monoxide.

Carbon dioxide.

Condition

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-Vapor (4 hours)	Rat	LC50 70.5 mg/l
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

Sensitization:**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 classification	Human	NOAEL Not available	
Ethyl acetate	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	

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.

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information

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

12.1. Toxicity**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 Nbr	Organism	Type	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-terminated, reaction products with chlorotrimethylsilane, hydrochloric acid, propan-2-ol and sodium silicate	68440-70-0	N/A	Data not available or insufficient for classification	N/A	N/A	N/A

12.2. Persistence and degradability

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

12.3 : Bioaccumulative potential

Material	CAS Nbr	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 chlorotrimethylsilane, 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

International Regulations

UN No.: None assigned

UN Proper shipping name: None assigned

Transportation Class (IMO): None assigned

Transportation Class (IATA): None assigned

Other Dangerous Goods Descriptions (IMO): None assigned

Other Dangerous Goods Descriptions (IATA): None assigned

Packing Group: None assigned

Marine pollutant: None assigned

SECTION 15: Regulatory information

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

Global inventory status

Contact 3M for more information. The components of this product are in compliance with the new substance notification requirements of CEPA. This product complies with Measures on Environmental Management of New Chemical Substances. All ingredients are listed on or exempt from on China IECSC inventory.

This product may contain component(s) that are regulated by the following:

Workplace Safety and Health Act & Workplace Safety and Health (General Provisions) Regulations: this product is subject to SDS, labelling, PEL and other requirements in the Act/Regulations.

SECTION 16: Other information

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 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.

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Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the SS586 Specification for Hazard Communication for Hazardous Chemicals and Dangerous Goods.

Document group:	31-4841-8	Version number:	1.03
Issue Date:	20/02/2020	Supersedes date:	24/07/2018

SECTION 1: Identification

1.1. Product identifier

3M™ ESPE™ IMPRINT™ 4 HEAVY CATALYST

1.2. Recommended use and restrictions on use

Recommended use

Dental Product, Impression Material

Restrictions on use

For us only by dental professionals

1.3. Supplier's details

Address: 3M Technologies (S) Pte Ltd, 10 Ang Mo Kio Street 65, Singapore 569059
Telephone: +65 6450 8888
Website: www.3m.com.sg

1.4. Emergency telephone number

+65 6591 6888 (8.15am - 5.00pm, Monday - Friday)

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

This product is not classified as hazardous per GHS criteria as implemented by Singapore Standard SS586.

2.2. Label elements

SIGNAL WORD

Not applicable.

Symbols

Not applicable.

Pictograms

Not applicable.

2.3. Other hazards

None known.

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	CAS Nbr	% by Wt
Cristobalite	14464-46-1	30 - 40
VINYL-POLYDIMETHYLSILOXANE	68083-19-2	30 - 40
Poly(dimethylsiloxane)	63148-62-9	1 - 10
SILANE TREATED SILICA	67762-90-7	1 - 10

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

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. 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

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 fraction):0.025 mg/m ³	A2: Suspected human carcin.
Cristobalite	14464-46-1	Singapore PELs	TWA(as respirable dust)(8 hours):0.05 mg/m ³	
Kieselguhr, soda ash flux-calcined	14464-46-1	Singapore PELs	TWA(8 hours):10 mg/m ³	
Glass filaments	14464-46-1	Singapore PELs	TWA(as dust)(8 hours):10 mg/m ³ ;TWA(as fiber)(8 hours):10 mg/m ³	

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

Singapore PELs : Singapore. Workplace Safety and Health (Permissible Exposure Levels of Toxic Substances) Order

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

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.

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
Color	Blue
Odor	Slight Odor, Characteristic Odour
Odour threshold	<i>No data available.</i>
pH	<i>No data available.</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	<i>No data available.</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>
Vapour density	<i>No data available.</i>
Density	1.4 g/cm ³ - 1.6 g/cm ³
Relative density	1.4 - 1.6 [Ref Std:WATER=1]
Water solubility	Negligible
Solubility- non-water	<i>No data available.</i>
Partition coefficient: n-octanol/water	<i>Not applicable.</i>
Autoignition temperature	<i>No data available.</i>
Decomposition temperature	<i>No data available.</i>
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>

SECTION 10: Stability and reactivity**10.1 Reactivity**

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

10.2 Chemical stability

Stable.

10.3 Possibility of hazardous reactions

Hazardous polymerisation will not occur.

10.4 Conditions to avoid

Heat.

10.5 Incompatible materials

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

10.6 Hazardous decomposition products

<u>Substance</u>	<u>Condition</u>
None known.	

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

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

11.1 Information on Toxicological effects

Signs and Symptoms of Exposure

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

Inhalation

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.

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

3M™ ESPE™ IMPRINT™ 4 HEAVY CATALYST

Name	Route	Species	Value
Overall product	Ingestion		No data available; calculated ATE >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
SILANE TREATED SILICA	Dermal	Rabbit	LD50 > 5,000 mg/kg
SILANE TREATED SILICA	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
SILANE TREATED SILICA	Ingestion	Rat	LD50 > 5,110 mg/kg
Poly(dimethylsiloxane)	Dermal	Rabbit	LD50 > 19,400 mg/kg
Poly(dimethylsiloxane)	Ingestion	Rat	LD50 > 17,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Cristobalite	Professional judgement	No significant irritation
VINYL-POLYDIMETHYLSILOXANE	Rabbit	No significant irritation
SILANE TREATED SILICA	Rabbit	No significant irritation
Poly(dimethylsiloxane)	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
VINYL-POLYDIMETHYLSILOXANE	Rabbit	Mild irritant
SILANE TREATED SILICA	Rabbit	No significant irritation
Poly(dimethylsiloxane)	Rabbit	No significant irritation

Skin Sensitisation

Name	Species	Value
SILANE TREATED 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
SILANE TREATED SILICA	In Vitro	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Cristobalite	Inhalation	Human and animal	Carcinogenic.
SILANE TREATED SILICA	Not specified.	Mouse	Some positive data exist, but the data are not sufficient for classification

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
SILANE TREATED SILICA	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
SILANE TREATED SILICA	Ingestion	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
SILANE TREATED 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.

Specific Target Organ Toxicity - repeated exposure

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
SILANE TREATED SILICA	Inhalation	respiratory system silicosis	Not classified	Human	NOAEL Not available	occupational exposure

Aspiration Hazard

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

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information

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

12.1. Toxicity**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 Nbr	Organism	Type	Exposure	Test endpoint	Test result
Cristobalite	14464-46-1		Data not available or insufficient for classification			
VINYL-POLYDIMETHYLSILOXANE	68083-19-2		Data not available or insufficient for			

NE			classification			
Poly(dimethyls iloxane)	63148-62-9		Data not available or insufficient for classification			
SILANE TREATED SILICA	67762-90-7		Data not available or insufficient for classification			

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Cristobalite	14464-46-1	Data not available- insufficient			N/A	
VINYL- POLYDIMET HYLSILOXA NE	68083-19-2	Data not available- insufficient			N/A	
Poly(dimethyls iloxane)	63148-62-9	Data not available- insufficient			N/A	
SILANE TREATED SILICA	67762-90-7	Data not available- insufficient			N/A	

12.3 : Bioaccumulative potential

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Cristobalite	14464-46-1	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
VINYL- POLYDIMET HYLSILOXA NE	68083-19-2	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Poly(dimethyls iloxane)	63148-62-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
SILANE TREATED SILICA	67762-90-7	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

International Regulations

UN No.: None assigned

UN Proper shipping name: None assigned

Transportation Class (IMO): None assigned

Transportation Class (IATA): None assigned

Other Dangerous Goods Descriptions (IMO): None assigned

Other Dangerous Goods Descriptions (IATA): None assigned

Packing Group: None assigned

Marine pollutant: None assigned

SECTION 15: Regulatory information

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

Global inventory status

All applicable chemical ingredients in this material are listed on the European Inventory of Existing Chemical Substances (EINECS), or are exempt polymers whose monomers are listed on EINECS. Contact 3M for more information. The components of this product are in compliance with the new substance notification requirements of CEPA. This product complies with Measures on Environmental Management of New Chemical Substances. All ingredients are listed on or exempt from on China IECSC inventory.

SECTION 16: Other information

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 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.

3M Singapore SDSs are available at www.3m.com.sg



Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the SS586 Specification for Hazard Communication for Hazardous Chemicals and Dangerous Goods.

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Issue Date:	20/10/2021	Supersedes date:	26/02/2020

SECTION 1: Identification

1.1. Product identifier

3M™ IMPRINT™ 4 HEAVY BASE

1.2. Recommended use and restrictions on use

Recommended use

Dental Product, Impression Material

Restrictions on use

For us only by dental professionals.

1.3. Supplier's details

Address: 3M Technologies (S) Pte Ltd,10 Ang Mo Kio Street 65, Singapore 569059
Telephone: +65 6450 8888
Website: www.3m.com.sg

1.4. Emergency telephone number

+65 6591 6888 (8.15am - 5.00pm, Monday - Friday)

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

This product is not classified as hazardous per GHS criteria as implemented by Singapore Standard SS586.

2.2. Label elements

SIGNAL WORD

Not applicable.

Symbols

Not applicable.

Pictograms

Not applicable.

2.3. Other hazards

None known.

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	CAS Nbr	% by Wt
Cristobalite	14464-46-1	40 - 60
VINYL-POLYDIMETHYL SILOXANE	68083-19-2	20 - 40
Dimethyl methyl hydrogen silicone fluid	68037-59-2	1 - 10
SILANE TREATED SILICA	67762-90-7	1 - 10
ALLYLTRIMETHYLSILANE	762-72-1	< 5
Poly(dimethylsiloxane)	63148-62-9	< 5
Poly(oxy-1,2-ethanediyl), .alpha.-methyl-.omega.-[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propoxy]-	27306-78-1	< 5
Quartz	14808-60-7	< 1
Oils, mint, Mentha arvensis piperascensis, var. piperascens, Labiatae.	90063-97-1	< 0.5

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

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**

Evacuate area. Ventilate the area with fresh air. 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 release to the environment. 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
Cristobalite	14464-46-1	ACGIH	TWA(respirable fraction):0.025 mg/m ³	A2: Suspected human carcin.
Cristobalite	14464-46-1	Singapore PELs	TWA(as respirable dust)(8 hours):0.05 mg/m ³	
Quartz	14808-60-7	ACGIH	TWA(respirable fraction):0.025 mg/m ³	A2: Suspected human carcin.
Quartz	14808-60-7	Singapore PELs	TWA(as respirable dust)(8 hours):0.1 mg/m ³	

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

Singapore PELs : Singapore. Workplace Safety and Health (Permissible Exposure Levels of Toxic Substances) Order

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

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.

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
Color	White
Odor	Minty
Odour threshold	<i>No data available.</i>
pH	<i>No data available.</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>No data available.</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	1.3 g/cm ³ - 1.5 g/cm ³
Relative density	1.3 - 1.5 [Ref Std:WATER=1]
Water solubility	Negligible
Solubility- non-water	<i>No data available.</i>
Partition coefficient: n-octanol/water	<i>Not applicable.</i>
Autoignition temperature	<i>No data available.</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 Possibility of hazardous reactions

Hazardous polymerisation will not occur.

10.4 Conditions to avoid

Heat.

10.5 Incompatible materials

Strong acids.

Strong bases.

Strong oxidising agents.

Amines.

10.6 Hazardous decomposition products

<u>Substance</u>	<u>Condition</u>
None known.	

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

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

11.1 Information on Toxicological effects

Signs and Symptoms of Exposure

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

Inhalation

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.

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	Dermal		No data available; calculated ATE >5,000 mg/kg
Overall product	Ingestion		No data available; calculated ATE >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-POLYDIMETHYL SILOXANE	Dermal	Rabbit	LD50 > 15,440 mg/kg
VINYL-POLYDIMETHYL SILOXANE	Ingestion	Rat	LD50 > 15,440 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
SILANE TREATED SILICA	Dermal	Rabbit	LD50 > 5,000 mg/kg
SILANE TREATED SILICA	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
SILANE TREATED SILICA	Ingestion	Rat	LD50 > 5,110 mg/kg
ALLYLTRIMETHYLSILANE	Dermal	Professional judgment	LD50 estimated to be 2,000 - 5,000 mg/kg
ALLYLTRIMETHYLSILANE	Ingestion	similar compounds	LD50 estimated to be 2,000 - 5,000 mg/kg
Poly(oxy-1,2-ethanediyl), .alpha.-methyl-.omega.-[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propoxy]-	Dermal	Rabbit	LD50 > 2,000 mg/kg
Poly(oxy-1,2-ethanediyl), .alpha.-methyl-.omega.-[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propoxy]-	Inhalation-Dust/Mist (4 hours)	Rat	LC50 2 mg/l
Poly(oxy-1,2-ethanediyl), .alpha.-methyl-.omega.-[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propoxy]-	Ingestion	Rat	LD50 > 2,000 mg/kg
Poly(dimethylsiloxane)	Dermal	Rabbit	LD50 > 19,400 mg/kg
Poly(dimethylsiloxane)	Ingestion	Rat	LD50 > 17,000 mg/kg
Quartz	Dermal		LD50 estimated to be > 5,000 mg/kg
Quartz	Ingestion		LD50 estimated to be > 5,000 mg/kg
Oils, mint, Mentha arvensis piperascensis, var. piperascens, Labiatae.	Dermal	Rabbit	LD50 > 5,000 mg/kg
Oils, mint, Mentha arvensis piperascensis, var. piperascens, Labiatae.	Ingestion	Rat	LD50 1,240 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Cristobalite	Professional judgment	No significant irritation
VINYL-POLYDIMETHYL SILOXANE	Rabbit	No significant irritation
Dimethyl methyl hydrogen silicone fluid	Rabbit	No significant irritation
SILANE TREATED SILICA	Rabbit	No significant irritation
ALLYLTRIMETHYLSILANE	Not available	Irritant
Poly(oxy-1,2-ethanediyl), .alpha.-methyl-.omega.-[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propoxy]-	Rabbit	No significant irritation
Poly(dimethylsiloxane)	Rabbit	No significant irritation
Quartz	Professional judgment	No significant irritation
Oils, mint, Mentha arvensis piperascensis, var. piperascens, Labiatae.	Rabbit	Mild irritant

Serious Eye Damage/Irritation

Name	Species	Value
VINYL-POLYDIMETHYL SILOXANE	Rabbit	Mild irritant
Dimethyl methyl hydrogen silicone fluid	Rabbit	Mild irritant
SILANE TREATED SILICA	Rabbit	No significant irritation
ALLYLTRIMETHYLSILANE	Not available	Severe irritant
Poly(oxy-1,2-ethanediyl), .alpha.-methyl-.omega.-[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propoxy]-	Rabbit	Severe irritant
Poly(dimethylsiloxane)	Rabbit	No significant irritation
Oils, mint, Mentha arvensis piperascensis, var. piperascens, Labiatae.	In vitro data	Severe irritant

Sensitization:**Skin Sensitisation**

Name	Species	Value
Dimethyl methyl hydrogen silicone fluid	Guinea pig	Not classified
SILANE TREATED SILICA	Human and animal	Not classified
Poly(oxy-1,2-ethanediyl), .alpha.-methyl-.omega.-[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propoxy]-	Guinea pig	Not classified
Oils, mint, Mentha arvensis piperascensis, var. piperascens, Labiatae.	Guinea pig	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
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
Dimethyl methyl hydrogen silicone fluid	In Vitro	Not mutagenic
SILANE TREATED SILICA	In Vitro	Not mutagenic
ALLYLTRIMETHYLSILANE	In Vitro	Not mutagenic
Poly(oxy-1,2-ethanediyl), .alpha.-methyl-.omega.-[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propoxy]-	In Vitro	Not mutagenic
Poly(oxy-1,2-ethanediyl), .alpha.-methyl-.omega.-[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propoxy]-	In vivo	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
Cristobalite	Inhalation	Human and animal	Carcinogenic.
SILANE TREATED 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
SILANE TREATED SILICA	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
SILANE TREATED SILICA	Ingestion	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
SILANE TREATED SILICA	Ingestion	Not classified for development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
Poly(oxy-1,2-ethanediyl), .alpha.-methyl-.omega.-[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propoxy]-	Ingestion	Not classified for reproduction and/or development	Rat	NOAEL 450 mg/kg/day	premating & during gestation

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

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
ALLYLTRIMETHYLSILANE	Inhalation	respiratory irritation	May cause respiratory irritation	Not available	NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

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
SILANE TREATED 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

Aspiration Hazard

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

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information

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

12.1. Toxicity**Acute aquatic hazard:**

GHS Acute 3: Harmful to aquatic life.

Chronic aquatic hazard:

GHS Chronic 3: Harmful to aquatic life with long lasting effects.

No product test data available.

Material	CAS Nbr	Organism	Type	Exposure	Test endpoint	Test result
Cristobalite	14464-46-1		Data not			N/A

			available or insufficient for classification			
VINYL-POLYDIMETHYLSILOXANE	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
SILANE TREATED SILICA	67762-90-7		Data not available or insufficient for classification			N/A
ALLYLTRIMETHYLSILANE	762-72-1		Data not available or insufficient for classification			N/A
Poly(dimethylsiloxane)	63148-62-9		Data not available or insufficient for classification			N/A
Poly(oxy-1,2-ethanediyl), al pha.-methyl-.omega.-[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propoxy]-	27306-78-1	Green Algae	Estimated	96 hours	EC50	32 mg/l
Poly(oxy-1,2-ethanediyl), al pha.-methyl-.omega.-[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propoxy]-	27306-78-1	Rainbow trout	Estimated	96 hours	LC50	4.5 mg/l
Poly(oxy-1,2-ethanediyl), al pha.-methyl-.omega.-[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propoxy]-	27306-78-1	Water flea	Estimated	48 hours	LC50	23.4 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
Oils, mint,	90063-97-1		Data not			NA

Mentha arvensis piperascensis, var. piperascens, Labiatae.			available or insufficient for classification			
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12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Cristobalite	14464-46-1	Data not available-insufficient			N/A	
VINYL-POLYDIMETHYL SILOXANE	68083-19-2	Data not available-insufficient			N/A	
Dimethyl methyl hydrogen silicone fluid	68037-59-2	Data not available-insufficient			N/A	
SILANE TREATED SILICA	67762-90-7	Data not available-insufficient			N/A	
ALLYLTRIMETHYLSILANE	762-72-1	Estimated Biodegradation	28 days	BOD	9 % BOD/ThBOD	OECD 301F - Manometric respirometry
Poly(dimethylsiloxane)	63148-62-9	Data not available-insufficient			N/A	
Poly(oxy-1,2-ethanediyl), alpha-methyl-omega-[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propoxy]-	27306-78-1	Estimated Biodegradation	28 days	BOD	1 % BOD/ThBOD	
Quartz	14808-60-7	Data not available-insufficient			N/A	
Oils, mint, Mentha arvensis piperascensis, var. piperascens, Labiatae.	90063-97-1	Data not available-insufficient			NA	

12.3 : Bioaccumulative potential

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Cristobalite	14464-46-1	Data not available or	N/A	N/A	N/A	N/A

		insufficient for classification				
VINYL-POLYDIMETHYLSILOXANE	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
SILANE TREATED SILICA	67762-90-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
ALLYLTRIMETHYLSILANE	762-72-1	Estimated Bioconcentration		Bioaccumulation factor	269	Estimated: Bioconcentration factor
Poly(dimethylsiloxane)	63148-62-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Poly(oxy-1,2-ethanediyl), al pha.-methyl-.omega.-[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propoxy]-	27306-78-1	Estimated Bioconcentration		Bioaccumulation factor	331	Estimated: Bioconcentration factor
Quartz	14808-60-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Oils, mint, Mentha arvensis piperascensis, var. piperascens, Labiatae.	90063-97-1	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. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

SECTION 14: Transport Information

International Regulations

UN No.: None assigned

UN Proper shipping name: None assigned

Transportation Class (IMO): None assigned

Transportation Class (IATA): None assigned

Other Dangerous Goods Descriptions (IMO): None assigned

Other Dangerous Goods Descriptions (IATA): None assigned

Packing Group: None assigned

Marine pollutant: None assigned

SECTION 15: Regulatory information

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

Global inventory status

Contact 3M for more information. The components of this product are in compliance with the new substance notification requirements of CEPA. This product complies with Measures on Environmental Management of New Chemical Substances. All ingredients are listed on or exempt from on China IECSC inventory.

SECTION 16: Other information

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 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.

3M Singapore SDSs are available at www.3m.com.sg