



Safety Data Sheet

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Document group: 31-6704-6 **Version number:** 1.00
Revision date: 16/03/2016 **Supersedes date:** Initial issue.
Transportation version number: 2.00 (08/09/2016)

This Safety Data Sheet has been prepared in accordance with the REACH Regulation (EC) 1907/2006 and its modifications.

IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

3M™ ESPE™ IMPRINT™ 4 PENTA™ HEAVY Intro Kit

Product Identification Numbers

70-2011-4149-9

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses

Dental Product

Restrictions on Use

For use only by dental professionals.

1.3. Details of the supplier of the safety data sheet

Address: 3M United Kingdom PLC, 3M Centre, Cain Road, Bracknell, Berkshire, RG12 8HT.
Telephone: +44 (0)1344 858 000
E Mail: tox.uk@mmm.com
Website: www.3M.com/uk

1.4. Emergency telephone number

+44 (0)1344 858 000

This product is a kit or a multipart product which consists of multiple, independently packaged components. A Safety Data Sheet for each of these components is included. Please do not separate the component Safety Data Sheets from this cover page. The document numbers of the MSDSs for components of this product are:

31-6673-3, 17-9416-3, 31-6670-9, 31-4879-8, 31-4882-2

TRANSPORTATION INFORMATION

70-2011-4149-9

ADR/RID: DANGEROUS GOODS IN EXCEPTED QUANTITIES, CLASS 3, II, (--).

IMDG-CODE: UN1133, ADHESIVES, 3, II, IMDG-Code segregation code: NONE, Dangerous Goods in excepted

Quantities, EMS: FE,SD.

ICAO/IATA: DANGEROUS GOODS IN EXCEPTED QUANTITIES OF CLASS 3,UN1133, II .

KIT LABEL

2.1. Classification of the substance or mixture CLP REGULATION (EC) No 1272/2008

This product is a medical device as defined in Directive 93/42/EEC (MDD), which is invasive or used in direct physical contact with the human body, and therefore is exempt from the requirements of classification and labelling according to Regulation (EC) No. 1272/2008 (CLP; Article 1, paragraph 5). Although not required, the classification and label information, as applicable, is provided below.

CLASSIFICATION:

Flammable Liquid, Category 2 - Flam. Liq. 2; H225

Serious Eye Damage/Eye Irritation, Category 2 - Eye Irrit. 2; H319

Specific Target Organ Toxicity-Single Exposure, Category 3 - STOT SE 3; H336

For full text of H phrases, see Section 16.

2.2. Label elements CLP REGULATION (EC) No 1272/2008

SIGNAL WORD
DANGER.

Symbols:
GHS02 (Flame) |GHS07 (Exclamation mark) |

Pictograms



HAZARD STATEMENTS:

H225	Highly flammable liquid and vapour.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.

PRECAUTIONARY STATEMENTS

Prevention:

P210A	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261A	Avoid breathing vapours.

Response:

P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P370 + P378G	In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

SUPPLEMENTAL INFORMATION

Supplemental Hazard Statements:

EUH066 Repeated exposure may cause skin dryness or cracking.

EUH208 Contains Oils, mint, *Mentha arvensis piperascensis*, var. *piperascens*, Labiatae..May produce an allergic reaction.

Revision information:

No revision information



Safety Data Sheet

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Document group:	17-9416-3	Version number:	12.00
Revision date:	25/07/2016	Supersedes date:	03/05/2016
Transportation version number:	4.00 (08/09/2016)		

This Safety Data Sheet has been prepared in accordance with the REACH Regulation (EC) 1907/2006 and its modifications.

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

VPS Tray Adhesive

Product Identification Numbers

70-2011-0649-2

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses

Dental Product

Restrictions on Use

For use only by dental professionals.

1.3. Details of the supplier of the safety data sheet

Address: 3M United Kingdom PLC, 3M Centre, Cain Road, Bracknell, Berkshire, RG12 8HT.
Telephone: +44 (0)1344 858 000
E Mail: tox.uk@mmm.com
Website: www.3M.com/uk

1.4. Emergency telephone number

+44 (0)1344 858 000

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

CLP REGULATION (EC) No 1272/2008

This product is a medical device as defined in Directive 93/42/EEC (MDD), which is invasive or used in direct physical contact with the human body, and therefore is exempt from the requirements of classification and labelling according to Regulation (EC) No. 1272/2008 (CLP; Article 1, paragraph 5). Although not required, the classification and label information, as applicable, is provided below.

CLASSIFICATION:

Flammable Liquid, Category 2 - Flam. Liq. 2; H225

VPS Tray Adhesive

Serious Eye Damage/Eye Irritation, Category 2 - Eye Irrit. 2; H319
Specific Target Organ Toxicity-Single Exposure, Category 3 - STOT SE 3; H336

For full text of H phrases, see Section 16.

2.2. Label elements

CLP REGULATION (EC) No 1272/2008

SIGNAL WORD

DANGER.

Symbols:

GHS02 (Flame) | GHS07 (Exclamation mark) |

Pictograms



Ingredients:

Ingredient	CAS Nbr	% by Wt
Ethyl acetate	141-78-6	70 - 80

HAZARD STATEMENTS:

H225	Highly flammable liquid and vapour.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.

PRECAUTIONARY STATEMENTS

Prevention:

P210A	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261A	Avoid breathing vapours.

Response:

P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P370 + P378G	In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

SUPPLEMENTAL INFORMATION

Supplemental Hazard Statements:

EUH066	Repeated exposure may cause skin dryness or cracking.
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2.3. Other hazards

For information on hazards and safe use, please consider the corresponding sections of this document.

SECTION 3: Composition/information on ingredients

Ingredient	CAS Nbr	EU Inventory	% by Wt	Classification
Ethyl acetate	141-78-6	205-500-4	70 - 80	Flam. Liq. 2, H225; Eye Irrit. 2,

VPS Tray Adhesive

				H319; STOT SE 3, H336; EUH066 (CLP)
Siloxanes and silicones, di-Me	63148-62-9		20 - 30	
Naphtha (petroleum), hydrotreated heavy	64742-48-9	265-150-3	1 - 5	Asp. Tox. 1, H304 - Nota P (CLP) Skin Irrit. 2, H315; STOT SE 3, H336 (Self Classified)

Please see section 16 for the full text of any H statements referred to in this section

For information on ingredient occupational exposure limits or PBT or vPvB status, see sections 8 and 12 of this SDS

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

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. 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. Advice 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.

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 vapours, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and

VPS Tray Adhesive

could cause flammable gases or vapours in the spill area to burn or explode. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Contain spill. Collect as much of the spilled material as possible using non-sparking tools. Place in a metal container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorised person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and Safety Data Sheet. Seal the container. Dispose of collected material as soon as possible.

6.4. Reference to other sections

Refer to Section 8 and Section 13 for more information

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid breathing of dust created by cutting, sanding, grinding or machining. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid contact with oxidising agents (eg. chlorine, chromic acid etc.) A no-touch technique is recommended. If skin contact occurs, wash skin with soap and water. If product contacts glove, remove and discard glove, wash hands immediately with soap and water and then re-glove.

7.2. Conditions for safe storage including any incompatibilities

Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store away from heat. Store away from acids. Store away from oxidising agents.

7.3. Specific end use(s)

See information in Section 7.1 and 7.2 for handling and storage recommendations. See Section 8 for exposure controls and personal protection recommendations.

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	UK HSC	TWA:200 ppm;STEL:400 ppm	
Naphtha (petroleum), hydrotreated heavy	64742-48-9	Manufacturer determined	TWA:100 ppm	

UK HSC : UK Health and Safety Commission

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

Biological limit values

No biological limit values exist for any of the components listed in Section 3 of this safety data sheet.

8.2. Exposure controls

8.2.1. Engineering controls

Use in a well-ventilated area.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:

Safety glasses with side shields.

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.
Appearance/Odour	Orange liquid with characteristic organic solvent odour.
Odour threshold	<i>No data available.</i>
pH	<i>No data available.</i>
Boiling point/boiling range	76.1 °C
Melting point	<i>No data available.</i>
Flammability (solid, gas)	Not applicable.
Explosive properties	Not classified
Oxidising properties	Not classified
Flash point	-3.9 °C [<i>Test Method: Closed Cup</i>]
Autoignition temperature	<i>No data available.</i>
Flammable Limits(LEL)	1.2 %
Flammable Limits(UEL)	11.5 %
Vapour pressure	17,465.2 Pa
Relative density	> 1 [<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>
Evaporation rate	<i>No data available.</i>
Vapour density	> 1 [<i>Ref Std: AIR=1</i>]
Decomposition temperature	<i>No data available.</i>
Viscosity	<i>No data available.</i>
Density	<i>No data available.</i>

9.2. Other information

Molecular weight	<i>No data available.</i>
Percent volatile	<i>No data available.</i>

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

Strong acids.

Not applicable.

10.6 Hazardous decomposition products

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

SECTION 11: Toxicological information

The information below may not agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 11 are based on UN GHS calculation rules and classifications derived from 3M assessments.

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

Mild Skin Irritation: Signs/symptoms may include localised 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. 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

VPS Tray Adhesive

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	Inhalation-Vapour(4 hr)		No data available; calculated ATE >50 mg/l
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
Ethyl acetate	Dermal	Rabbit	LD50 > 18,000 mg/kg
Ethyl acetate	Inhalation-Vapour (4 hours)	Rat	LC50 70.5 mg/l
Ethyl acetate	Ingestion	Rat	LD50 5,620 mg/kg
Siloxanes and silicones, di-Me	Dermal	Rabbit	LD50 > 19,400 mg/kg
Siloxanes and silicones, di-Me	Ingestion	Rat	LD50 > 17,000 mg/kg
Naphtha (petroleum), hydrotreated heavy	Inhalation-Vapour		LC50 estimated to be 20 - 50 mg/l
Naphtha (petroleum), hydrotreated heavy	Dermal	Rabbit	LD50 > 3,000 mg/kg
Naphtha (petroleum), hydrotreated heavy	Ingestion	Rat	LD50 > 5,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Ethyl acetate	Rabbit	Minimal irritation
Siloxanes and silicones, di-Me	Rabbit	No significant irritation
Naphtha (petroleum), hydrotreated heavy	Rabbit	Irritant

Serious Eye Damage/Irritation

Name	Species	Value
Ethyl acetate	Rabbit	Mild irritant
Siloxanes and silicones, di-Me	Rabbit	No significant irritation
Naphtha (petroleum), hydrotreated heavy	Rabbit	No significant irritation

Skin Sensitisation

Name	Species	Value
Ethyl acetate	Guinea pig	Not sensitising
Naphtha (petroleum), hydrotreated heavy	Guinea pig	Not sensitising

Respiratory Sensitisation

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

Germ Cell Mutagenicity

Name	Route	Value
Ethyl acetate	In Vitro	Not mutagenic
Ethyl acetate	In vivo	Not mutagenic
Naphtha (petroleum), hydrotreated heavy	In vivo	Not mutagenic
Naphtha (petroleum), hydrotreated heavy	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Naphtha (petroleum), hydrotreated heavy	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
Naphtha (petroleum), hydrotreated heavy	Inhalation	Human	Some positive data exist, but the data are not

VPS Tray Adhesive

		and animal	sufficient for classification
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Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
Naphtha (petroleum), hydrotreated heavy	Inhalation	Not toxic to development	Rat	NOAEL 2.4 mg/l	during organogenesis

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	
Naphtha (petroleum), hydrotreated heavy	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human and animal	NOAEL Not available	
Naphtha (petroleum), hydrotreated heavy	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
Naphtha (petroleum), hydrotreated heavy	Inhalation	nervous system	Some positive data exist, but the data are not sufficient for classification	Dog	NOAEL 6.5 mg/l	4 hours
Naphtha (petroleum), hydrotreated heavy	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	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	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 0.043 mg/l	90 days
Ethyl acetate	Inhalation	hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Rabbit	LOAEL 16 mg/l	40 days
Ethyl acetate	Ingestion	hematopoietic system liver kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 3,600 mg/kg/day	90 days
Naphtha (petroleum), hydrotreated heavy	Inhalation	nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 4.6 mg/l	6 months
Naphtha (petroleum), hydrotreated heavy	Inhalation	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 1.9 mg/l	13 weeks
Naphtha (petroleum), hydrotreated heavy	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL 0.6 mg/l	90 days
Naphtha (petroleum), hydrotreated heavy	Inhalation	bone, teeth, nails, and/or hair blood liver muscles	All data are negative	Rat	NOAEL 5.6 mg/l	12 weeks
Naphtha (petroleum), hydrotreated heavy	Inhalation	heart	All data are negative	Multiple animal species	NOAEL 1.3 mg/l	90 days

VPS Tray Adhesive**Aspiration Hazard**

Name	Value
Naphtha (petroleum), hydrotreated heavy	Aspiration hazard

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 agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 12 are based on UN GHS calculation rules and classifications derived from 3M assessments.

12.1. Toxicity

No product test data available.

Material	CAS Nbr	Organism	Type	Exposure	Test endpoint	Test result
Ethyl acetate	141-78-6	Fish	Experimental	96 hours	LC50	212.5 mg/l
Ethyl acetate	141-78-6	Crustacea	Experimental	48 hours	EC50	164 mg/l
Ethyl acetate	141-78-6	Green algae	Experimental	72 hours	EC50	2,500 mg/l
Ethyl acetate	141-78-6	Water flea	Experimental	21 days	NOEC	2.4 mg/l
Naphtha (petroleum), hydrotreated heavy	64742-48-9		Data not available or insufficient for classification			
Siloxanes and silicones, di-Me	63148-62-9		Data not available or insufficient for classification			
Ethyl acetate	141-78-6	Crustacea	Experimental	48 hours	EC50	164 mg/l

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Ethyl acetate	141-78-6	Experimental Photolysis		Photolytic half-life (in air)	20.0 days (t _{1/2})	Other methods
Siloxanes and silicones, di-Me	63148-62-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Naphtha (petroleum), hydrotreated heavy	64742-48-9	Experimental Biodegradation	28 days	Dissolv. Organic Carbon Deplet	10 % weight	OECD 301D - Closed bottle test
Ethyl acetate	141-78-6	Experimental Biodegradation	14 days	BOD	66 % weight	OECD 301C - MITI test (I)
Naphtha (petroleum), hydrotreated heavy	64742-48-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

12.3 : Bioaccumulative potential

VPS Tray Adhesive

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Naphtha (petroleum), hydrotreated heavy	64742-48-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Siloxanes and silicones, di-Me	63148-62-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Ethyl acetate	141-78-6	Experimental Bioaccumulation		Log Kow	0.73	Other methods
Ethyl acetate	141-78-6	Experimental BCF - Other	96 hours	Bioaccumulation factor	30	Other methods

12.4. Mobility in soil

Please contact manufacturer for more details

12.5. Results of the PBT and vPvB assessment

No information available at this time, contact manufacturer for more details

12.6. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

See Section 11.1 Information on toxicological effects

Incinerate in a permitted waste incineration facility.

The coding of a waste stream is based on the application of the product by the consumer. Since this is out of the control of 3M, no waste code(s) for products after use will be provided. Please refer to the European Waste Code (EWC - 2000/532/EC and amendments) to assign the correct waste code to your waste stream. Ensure national and/or regional regulations are complied with and always use a licensed waste contractor.

EU waste code (product as sold)

180106* Chemicals consisting of or containing dangerous substances.

SECTION 14: Transportation information

70-2011-0649-2

ADR/RID: DANGEROUS GOODS IN EXCEPTED QUANTITIES, CLASS 3, II, (--).

IMDG-CODE: UN1133, ADHESIVES, 3, II, IMDG-Code segregation code: NONE, DANGEROUS GOODS IN EXCEPTED QUANTITIES, EMS: FE, SD.

ICAO/IATA: DANGEROUS GOODS IN EXCEPTED QUANTITIES OF CLASS 3, UN1133, II.

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 material are in compliance with the China "Measures on Environmental Management of New Chemical Substance". Certain restrictions may apply. Contact the selling division for additional information. The components of this product are in compliance with the new substance notification requirements of CEPA.

15.2. Chemical Safety Assessment

Not applicable

SECTION 16: Other information

List of relevant H statements

EUH066	Repeated exposure may cause skin dryness or cracking.
H225	Highly flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.

Revision information:

Section 12: Component ecotoxicity information information was modified.

Section 14: Transportation classification information was deleted.

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 United Kingdom MSDSs are available at www.3M.com/uk



Safety Data Sheet

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Document group:	31-4879-8	Version number:	5.02
Revision date:	02/02/2018	Supersedes date:	08/02/2017
Transportation version number:	1.00 (22/04/2014)		

This Safety Data Sheet has been prepared in accordance with the REACH Regulation (EC) 1907/2006 and its modifications.

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

3M™ ESPE™ IMPRINT™ 4 REGULAR BASE

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses

Dental Product

Restrictions on Use

For use only by dental professionals.

1.3. Details of the supplier of the safety data sheet

Address: 3M United Kingdom PLC, 3M Centre, Cain Road, Bracknell, Berkshire, RG12 8HT.
Telephone: +44 (0)1344 858 000
E Mail: tox.uk@mmm.com
Website: www.3M.com/uk

1.4. Emergency telephone number

+44 (0)1344 858 000

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

CLP REGULATION (EC) No 1272/2008

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CLASSIFICATION:

This material is not classified as hazardous according to Regulation (EC) No. 1272/2008, as amended, on classification, labelling, and packaging of substances and mixtures.

2.2. Label elements

3M™ ESPE™ IMPRINT™ 4 REGULAR BASE**CLP REGULATION (EC) No 1272/2008**

Not applicable

SUPPLEMENTAL INFORMATION**Supplemental Hazard Statements:**

EUH208

Contains Oils, mint, *Mentha arvensis piperascensis*, var. *piperascens*, Labiatae..
May produce an allergic reaction.**Notes on labelling**

This product contains a substance classified as STOT RE 1. Based on the physical form, exposure by inhalation is not expected.

2.3. Other hazards

For information on hazards and safe use, please consider the corresponding sections of this document.

SECTION 3: Composition/information on ingredients

Ingredient	CAS Nbr	EC No.	REACH Registration No.	% by Wt	Classification
Siloxanes and silicones, Di-Me, vinyl group-terminated	68083-19-2			30 - 50	Substance not classified as hazardous
Cristobalite	14464-46-1	238-455-4		20 - 30	STOT RE 1, H372
Dimethyl methyl hydrogen silicone fluid	68037-59-2			10 - 20	Substance not classified as hazardous
Glycols,polyethylene,methyl 3-[1,3,3,3-tetramethyl-1-(trimethylsiloxy)disiloxanyl]propyl ether	27306-78-1			1 - 10	Acute Tox. 4, H332; Eye Irrit. 2, H319
Silica, vitreous	60676-86-0	262-373-8		1 - 10	Substance with a Community level exposure limit in the workplace
Siloxanes and Silicones, di-Me, reaction products with silica (nanomaterial)	67762-90-7			1 - 10	Substance not classified as hazardous
FLUORINATED POLYETHER	Trade Secret			1 - 5	Substance not classified as hazardous
Silane, trimethyl-2-propenyl-	762-72-1	212-104-5		< 5	Substance not classified as hazardous
Tridymite	15468-32-3	239-487-1		< 1	STOT RE 1, H372
Oils, mint, <i>Mentha arvensis piperascensis</i> , var. <i>piperascens</i> , Labiatae.	68917-18-0			< 0.5	Acute Tox. 4, H302; Eye Irrit. 2, H319; Skin Sens. 1B, H317
Quartz	14808-60-7	238-878-4		< 0.5	STOT RE 1, H372

Please see section 16 for the full text of any H statements referred to in this section

For information on ingredient occupational exposure limits or PBT or vPvB status, see sections 8 and 12 of this SDS

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

Inhalation

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

Skin contact

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

Eye contact

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

If swallowed

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

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

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. 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. Advice for fire-fighters

No special protective actions for fire-fighters are anticipated.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

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.

6.4. Reference to other sections

Refer to Section 8 and Section 13 for more information

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Avoid contact with oxidising agents (eg. chlorine, chromic acid etc.) A no-touch technique is recommended. If skin contact occurs, wash skin with soap and water. If product contacts glove, remove and discard glove, wash hands immediately with soap and water and then re-glove.

7.2. Conditions for safe storage including any incompatibilities

Store away from heat. Store away from acids. Store away from strong bases. Store away from oxidising agents. Store away from amines.

7.3. Specific end use(s)

See information in Section 7.1 and 7.2 for handling and storage recommendations. See Section 8 for exposure controls and personal protection recommendations.

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
Quartz	14464-46-1	UK HSC	TWA(respirable):0.1 mg/m ³	
Quartz	14808-60-7	UK HSC	TWA(respirable):0.1 mg/m ³	
Quartz	15468-32-3	UK HSC	TWA(respirable):0.1 mg/m ³	
Silica, vitreous	60676-86-0	UK HSC	TWA(as respirable dust):0.08 mg/m ³	

UK HSC : UK Health and Safety Commission

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

Biological limit values

No biological limit values exist for any of the components listed in Section 3 of this safety data sheet.

8.2. Exposure controls

8.2.1. Engineering controls

Use in a well-ventilated area.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:

Safety glasses with side shields.

Skin/hand protection

See Section 7.1 for additional information on skin protection.

Respiratory protection

Under normal use conditions, airborne exposures are not expected to be significant enough to require respiratory protection.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Solid.
Specific Physical Form:	Paste
Appearance/Odour	Smell of mint; white colour paste
Odour threshold	<i>No data available.</i>
pH	<i>Not applicable.</i>
Boiling point/boiling range	<i>Not applicable.</i>
Melting point	<i>Not applicable.</i>
Flammability (solid, gas)	Not classified
Explosive properties	Not classified
Oxidising properties	Not classified
Flash point	No flash point
Autoignition temperature	<i>Not applicable.</i>
Flammable Limits(LEL)	<i>Not applicable.</i>
Flammable Limits(UEL)	<i>Not applicable.</i>
Vapour pressure	<i>No data available.</i>
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>
Evaporation rate	<i>Not applicable.</i>
Vapour density	<i>No data available.</i>
Decomposition temperature	<i>No data available.</i>
Viscosity	<i>No data available.</i>
Density	1.1 g/cm ³ - 1.3 g/cm ³

9.2. Other information

EU Volatile Organic Compounds	<i>No data available.</i>
Percent volatile	<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.

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Strong oxidising agents.

10.6 Hazardous decomposition products

Substance

None known.

Condition

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 11 are based on UN GHS calculation rules and classifications derived from 3M assessments.

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

Eye contact

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

Ingestion

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
Siloxanes and silicones, Di-Me, vinyl group-terminated	Dermal	Rabbit	LD50 > 15,440 mg/kg
Siloxanes and silicones, Di-Me, vinyl group-terminated	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
Siloxanes and Silicones, di-Me, reaction products with silica (nanomaterial)	Dermal	Rabbit	LD50 > 5,000 mg/kg

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Siloxanes and Silicones, di-Me, reaction products with silica (nanomaterial)	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Siloxanes and Silicones, di-Me, reaction products with silica (nanomaterial)	Ingestion	Rat	LD50 > 5,110 mg/kg
Silica, vitreous	Dermal	Rabbit	LD50 > 5,000 mg/kg
Silica, vitreous	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Silica, vitreous	Ingestion	Rat	LD50 > 5,110 mg/kg
Glycols,polyethylene,methyl 3-[1,3,3,3-tetramethyl-1-(trimethylsiloxy)disiloxanyl]propyl ether	Dermal	Rabbit	LD50 > 2,000 mg/kg
Glycols,polyethylene,methyl 3-[1,3,3,3-tetramethyl-1-(trimethylsiloxy)disiloxanyl]propyl ether	Inhalation-Dust/Mist (4 hours)	Rat	LC50 2 mg/l
Glycols,polyethylene,methyl 3-[1,3,3,3-tetramethyl-1-(trimethylsiloxy)disiloxanyl]propyl ether	Ingestion	Rat	LD50 > 2,000 mg/kg
Silane, trimethyl-2-propenyl-	Dermal	Professional judgement	LD50 estimated to be 2,000 - 5,000 mg/kg
Silane, trimethyl-2-propenyl-	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
Tridymite	Dermal		LD50 estimated to be > 5,000 mg/kg
Tridymite	Ingestion		LD50 estimated to be > 5,000 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
Siloxanes and silicones, Di-Me, vinyl group-terminated	Rabbit	No significant irritation
Cristobalite	Professional judgement	No significant irritation
Siloxanes and Silicones, di-Me, reaction products with silica (nanomaterial)	Rabbit	No significant irritation
Silica, vitreous	Rabbit	No significant irritation
Glycols,polyethylene,methyl 3-[1,3,3,3-tetramethyl-1-(trimethylsiloxy)disiloxanyl]propyl ether	Rabbit	No significant irritation
Tridymite	Professional judgement	No significant irritation
Quartz	Professional judgement	No significant irritation
Oils, mint, Mentha arvensis piperascensis, var. piperascens, Labiatae.	Rabbit	Mild irritant

Serious Eye Damage/Irritation

Name	Species	Value
Siloxanes and silicones, Di-Me, vinyl group-terminated	Rabbit	Mild irritant

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Siloxanes and Silicones, di-Me, reaction products with silica (nanomaterial)	Rabbit	No significant irritation
Silica, vitreous	Rabbit	No significant irritation
Glycols,polyethylene,methyl 3-[1,3,3,3-tetramethyl-1-(trimethylsiloxy)disiloxanyl]propyl ether	Rabbit	Severe irritant
Oils, mint, Mentha arvensis piperascensis, var. piperascens, Labiatae.	In vitro data	Severe irritant

Skin Sensitisation

Name	Species	Value
Siloxanes and Silicones, di-Me, reaction products with silica (nanomaterial)	Human and animal	Not classified
Silica, vitreous	Human and animal	Not classified
Glycols,polyethylene,methyl 3-[1,3,3,3-tetramethyl-1-(trimethylsiloxy)disiloxanyl]propyl ether	Guinea pig	Not classified
Oils, mint, Mentha arvensis piperascensis, var. piperascens, Labiatae.	Guinea pig	Sensitising

Respiratory Sensitisation

For the component/components, either no data is currently available or the data is 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
Siloxanes and Silicones, di-Me, reaction products with silica (nanomaterial)	In Vitro	Not mutagenic
Silica, vitreous	In Vitro	Not mutagenic
Glycols,polyethylene,methyl 3-[1,3,3,3-tetramethyl-1-(trimethylsiloxy)disiloxanyl]propyl ether	In Vitro	Not mutagenic
Glycols,polyethylene,methyl 3-[1,3,3,3-tetramethyl-1-(trimethylsiloxy)disiloxanyl]propyl ether	In vivo	Not mutagenic
Tridymite	In Vitro	Some positive data exist, but the data are not sufficient for classification
Tridymite	In vivo	Some positive data exist, but the data are not sufficient for classification
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.
Siloxanes and Silicones, di-Me, reaction products with silica (nanomaterial)	Not specified.	Mouse	Some positive data exist, but the data are not sufficient for classification
Silica, vitreous	Not specified.	Mouse	Some positive data exist, but the data are not sufficient for classification
Tridymite	Inhalation	Human and animal	Carcinogenic.
Quartz	Inhalation	Human and animal	Carcinogenic.

Reproductive Toxicity

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Name	Route	Value	Species	Test result	Exposure Duration
Siloxanes and Silicones, di-Me, reaction products with silica (nanomaterial)	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Siloxanes and Silicones, di-Me, reaction products with silica (nanomaterial)	Ingestion	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Siloxanes and Silicones, di-Me, reaction products with silica (nanomaterial)	Ingestion	Not classified for development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
Silica, vitreous	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Silica, vitreous	Inhalation	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Silica, vitreous	Ingestion	Not classified for development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
Glycols,polyethylene,methyl 3-[1,3,3,3-tetramethyl-1-(trimethylsiloxy)disiloxanyl]propyl ether	Ingestion	Not classified for reproduction and/or development	Rat	NOAEL 450 mg/kg/day	prematuring & during gestation
FLUORINATED POLYETHER	Ingestion	Not classified for reproduction and/or development	Rat	NOAEL 1,000 mg/kg/day	prematuring into lactation
FLUORINATED POLYETHER	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	prematuring into lactation
FLUORINATED POLYETHER	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	prematuring into lactation

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

For the component/components, either no data is currently available or the data is 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
Siloxanes and Silicones, di-Me, reaction products with silica (nanomaterial)	Inhalation	respiratory system silicosis	Not classified	Human	NOAEL Not available	occupational exposure
Silica, vitreous	Inhalation	respiratory system silicosis	Not classified	Human	NOAEL Not available	occupational exposure
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
Tridymite	Inhalation	silicosis	Causes damage to organs through prolonged or repeated exposure	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 is currently available or the data is 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 agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 12 are based on UN GHS calculation rules and classifications derived from 3M assessments.

12.1. Toxicity

No product test data available.

Material	CAS Nbr	Organism	Type	Exposure	Test endpoint	Test result
Siloxanes and silicones, Di-Me, vinyl group-terminated	68083-19-2		Data not available or insufficient for classification			
Cristobalite	14464-46-1		Data not available or insufficient for classification			
Dimethyl methyl hydrogen silicone fluid	68037-59-2		Data not available or insufficient for classification			
Silica, vitreous	60676-86-0	Common Carp	Experimental	72 hours	LC50	>10,000 mg/l
Glycols,polyethylene,methyl 3-[1,3,3,3-tetramethyl-1-(trimethylsiloxy)disiloxyanyl]propyl ether	27306-78-1		Data not available or insufficient for classification			
Siloxanes and Silicones, di-Me, reaction products with silica (nanomaterial)	67762-90-7		Data not available or insufficient for classification			
FLUORINATED POLYETHER	Trade Secret		Data not available or insufficient for classification			
Silane, trimethyl-2-propenyl-	762-72-1		Data not available or insufficient for classification			
Tridymite	15468-32-3		Data not available or insufficient for classification			
Oils, mint, Mentha arvensis piperascenssis, var. piperascens, Labiatae.	68917-18-0		Data not available or insufficient for classification			
Quartz	14808-60-7		Data not available or insufficient for classification			

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Siloxanes and silicones, Di-Me, vinyl group-terminated	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
Silica, vitreous	60676-86-0	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

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Glycols,polyethylene,methyl 3-[1,3,3,3-tetramethyl-1-(trimethylsiloxy)disiloxanyl]propyl ether	27306-78-1	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Siloxanes and Silicones, di-Me, reaction products with silica (nanomaterial)	67762-90-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
FLUORINATED POLYETHER	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Silane, trimethyl-2-propenyl-	762-72-1	Estimated Biodegradation	28 days	BOD	9 % BOD/ThBOD	OECD 301F - Manometric respirometry
Tridymite	15468-32-3	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Oils, mint, Mentha arvensis piperascensis, var. piperascens, Labiatae.	68917-18-0	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Quartz	14808-60-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

12.3 : Bioaccumulative potential

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Siloxanes and silicones, Di-Me, vinyl group-terminated	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
Silica, vitreous	60676-86-0	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Glycols,polyethylene,methyl 3-[1,3,3,3-tetramethyl-1-(trimethylsiloxy)disiloxanyl]propyl ether	27306-78-1	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Siloxanes and Silicones, di-Me, reaction products with silica (nanomaterial)	67762-90-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
FLUORINATED POLYETHER	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Silane, trimethyl-2-propenyl-	762-72-1	Estimated Bioconcentration		Bioaccumulation factor	269	Estimated: Bioconcentration factor
Tridymite	15468-32-3	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Oils, mint, Mentha arvensis piperascensis, var. piperascens, Labiatae.	68917-18-0	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Quartz	14808-60-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

12.4. Mobility in soil

Please contact manufacturer for more details

12.5. Results of the PBT and vPvB assessment

No information available at this time, contact manufacturer for more details

12.6. Other adverse effects

No information available.

SECTION 13: Disposal considerations**13.1 Waste treatment methods**

See Section 11.1 Information on toxicological effects

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

The coding of a waste stream is based on the application of the product by the consumer. Since this is out of the control of 3M, no waste code(s) for products after use will be provided. Please refer to the European Waste Code (EWC - 2000/532/EC and amendments) to assign the correct waste code to your waste stream. Ensure national and/or regional regulations are complied with and always use a licensed waste contractor.

EU waste code (product as sold)

180104 Wastes whose collection and disposal is not subject to special requirements in order to prevent infection (for example dressings, plaster casts, linen, disposable clothing, diapers)

SECTION 14: Transportation information

ADR/IMDG/IATA: Not restricted for transport.

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

<u>Ingredient</u>	<u>CAS Nbr</u>	<u>Classification</u>	<u>Regulation</u>
Cristobalite	14464-46-1	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer
Quartz	14808-60-7	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer

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.

15.2. Chemical Safety Assessment

Not applicable

SECTION 16: Other information**List of relevant H statements**

H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H372	Causes damage to organs through prolonged or repeated exposure.

Revision information:

Section 3: Composition/ Information of ingredients table information was added.
Section 3: Composition/ Information of ingredients table information was deleted.
Section 9: Property description for optional properties information was modified.
Section 10.1: Reactivity information information was modified.
Section 11: Reproductive Toxicity Table information was modified.
Section 11: Skin Sensitization Table information was modified.
Section 11: Target Organs - Repeated Table information was modified.
Section 12: Component ecotoxicity information information was modified.
Section 12: Persistence and Degradability information information was modified.
Section 12: Biocumulative potential information information was modified.
Section 13: Standard Phrase Category Waste GHS information was modified.

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 United Kingdom MSDSs are available at www.3M.com/uk



Safety Data Sheet

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Document group:	31-4882-2	Version number:	2.01
Revision date:	05/02/2018	Supersedes date:	16/03/2016
Transportation version number:	1.00 (21/05/2014)		

This Safety Data Sheet has been prepared in accordance with the REACH Regulation (EC) 1907/2006 and its modifications.

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

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1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses

Dental Product

Restrictions on Use

For use only by dental professionals.

1.3. Details of the supplier of the safety data sheet

Address: 3M United Kingdom PLC, 3M Centre, Cain Road, Bracknell, Berkshire, RG12 8HT.
Telephone: +44 (0)1344 858 000
E Mail: tox.uk@mmm.com
Website: www.3M.com/uk

1.4. Emergency telephone number

+44 (0)1344 858 000

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

CLP REGULATION (EC) No 1272/2008

This product is a medical device as defined in Directive 93/42/EEC (MDD), which is invasive or used in direct physical contact with the human body, and therefore is exempt from the requirements of classification and labelling according to Regulation (EC) No. 1272/2008 (CLP; Article 1, paragraph 5). Although not required, the classification and label information, as applicable, is provided below.

CLASSIFICATION:

This material is not classified as hazardous according to Regulation (EC) No. 1272/2008, as amended, on classification, labelling, and packaging of substances and mixtures.

2.2. Label elements

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Not applicable

Notes on labelling

This product contains a substance classified as STOT RE 1. Based on the physical form, exposure by inhalation is not expected.

2.3. Other hazards

For information on hazards and safe use, please consider the corresponding sections of this document.

SECTION 3: Composition/information on ingredients

Ingredient	CAS Nbr	EC No.	REACH Registration No.	% by Wt	Classification
Siloxanes and silicones, Di-Me, vinyl group-terminated	68083-19-2			40 - 60	Substance not classified as hazardous
Cristobalite	14464-46-1	238-455-4		20 - 40	STOT RE 1, H372
Silica, vitreous	60676-86-0	262-373-8		5 - 20	Substance with a Community level exposure limit in the workplace
Siloxanes and silicones, di-Me	63148-62-9			1 - 10	Substance not classified as hazardous
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7			1 - 10	Substance with a Community level exposure limit in the workplace
Tridymite	15468-32-3	239-487-1		< 2	STOT RE 1, H372
CI Pig Yellow 109	5045-40-9	225-744-5		< 2	Substance not classified as hazardous
Cobalt aluminate blue spinel	1345-16-0	310-193-6		< 1	Substance with a Community level exposure limit in the workplace
Quartz	14808-60-7	238-878-4		< 0.3	STOT RE 1, H372

Please see section 16 for the full text of any H statements referred to in this section

For information on ingredient occupational exposure limits or PBT or vPvB status, see sections 8 and 12 of this SDS

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.

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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. Extinguishing media

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

5.2. Special hazards arising from the substance or mixture

None inherent in this product.

Hazardous Decomposition or By-Products

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

5.3. Advice for fire-fighters

No special protective actions for fire-fighters are anticipated.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapours, 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.

6.4. Reference to other sections

Refer to Section 8 and Section 13 for more information

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.

7.3. Specific end use(s)

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See information in Section 7.1 and 7.2 for handling and storage recommendations. See Section 8 for exposure controls and personal protection recommendations.

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
Cobalt compounds	1345-16-0	UK HSC	TWA(as Co):0.1 mg/m ³	Respiratory Sensitizer
Glass, oxide, chemicals	14464-46-1	UK HSC	TWA(as fiber):5 mg/m ³ (1 fibers/ml)	
Quartz	14464-46-1	UK HSC	TWA(respirable):0.1 mg/m ³	
Quartz	14808-60-7	UK HSC	TWA(respirable):0.1 mg/m ³	
Quartz	15468-32-3	UK HSC	TWA(respirable):0.1 mg/m ³	
Silicon dioxide	60676-86-0	UK HSC	TWA(as inhalable dust):6 mg/m ³	
Silica, vitreous	60676-86-0	UK HSC	TWA(as respirable dust):0.08 mg/m ³	
Silicon dioxide	67762-90-7	UK HSC	TWA(as inhalable dust):6 mg/m ³ ;TWA(as respirable dust):2.4 mg/m ³	

UK HSC : UK Health and Safety Commission

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

Biological limit values

No biological limit values exist for any of the components listed in Section 3 of this safety data sheet.

8.2. Exposure controls

8.2.1. Engineering controls

Use in a well-ventilated area.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:

Safety glasses with side shields.

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
Appearance/Odour	Slight characteristic odour; white coloured paste
Odour threshold	<i>No data available.</i>
pH	<i>Not applicable.</i>
Boiling point/boiling range	<i>Not applicable.</i>
Melting point	<i>Not applicable.</i>
Flammability (solid, gas)	Not classified
Explosive properties	Not classified
Oxidising properties	Not classified
Flash point	No flash point
Autoignition temperature	<i>Not applicable.</i>
Flammable Limits(LEL)	<i>Not applicable.</i>
Flammable Limits(UEL)	<i>Not applicable.</i>
Vapour pressure	<i>No data available.</i>
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>
Evaporation rate	<i>Not applicable.</i>
Vapour density	<i>No data available.</i>
Decomposition temperature	<i>No data available.</i>
Viscosity	<i>No data available.</i>
Density	1.2 g/cm ³ - 1.4 g/cm ³

9.2. Other information

EU Volatile Organic Compounds	<i>No data available.</i>
Percent volatile	<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 agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 11 are based on UN GHS calculation rules and classifications derived from 3M assessments.

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
Siloxanes and silicones, Di-Me, vinyl group-terminated	Dermal	Rabbit	LD50 > 15,440 mg/kg
Siloxanes and silicones, Di-Me, vinyl group-terminated	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
Silica, vitreous	Dermal	Rabbit	LD50 > 5,000 mg/kg
Silica, vitreous	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Silica, vitreous	Ingestion	Rat	LD50 > 5,110 mg/kg
Siloxanes and Silicones, di-Me, reaction products with silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
Siloxanes and Silicones, di-Me, reaction products with silica	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Siloxanes and Silicones, di-Me, reaction products with silica	Ingestion	Rat	LD50 > 5,110 mg/kg
Tridymite	Dermal		LD50 estimated to be > 5,000 mg/kg
Tridymite	Ingestion		LD50 estimated to be > 5,000 mg/kg
Siloxanes and silicones, di-Me	Dermal	Rabbit	LD50 > 19,400 mg/kg
Siloxanes and silicones, di-Me	Ingestion	Rat	LD50 > 17,000 mg/kg
Cobalt aluminate blue spinel	Dermal		LD50 estimated to be > 5,000 mg/kg

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Cobalt aluminate blue spinel	Ingestion	Rat	LD50 > 10,000 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
Siloxanes and silicones, Di-Me, vinyl group-terminated	Rabbit	No significant irritation
Cristobalite	Professional judgement	No significant irritation
Silica, vitreous	Rabbit	No significant irritation
Siloxanes and Silicones, di-Me, reaction products with silica	Rabbit	No significant irritation
Tridymite	Professional judgement	No significant irritation
Siloxanes and silicones, di-Me	Rabbit	No significant irritation
Quartz	Professional judgement	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Siloxanes and silicones, Di-Me, vinyl group-terminated	Rabbit	Mild irritant
Silica, vitreous	Rabbit	No significant irritation
Siloxanes and Silicones, di-Me, reaction products with silica	Rabbit	No significant irritation
Siloxanes and silicones, di-Me	Rabbit	No significant irritation

Skin Sensitisation

Name	Species	Value
Silica, vitreous	Human and animal	Not classified
Siloxanes and Silicones, di-Me, reaction products with silica	Human and animal	Not classified

Respiratory Sensitisation

For the component/components, either no data is currently available or the data is 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
Silica, vitreous	In Vitro	Not mutagenic
Siloxanes and Silicones, di-Me, reaction products with silica	In Vitro	Not mutagenic
Tridymite	In Vitro	Some positive data exist, but the data are not sufficient for classification
Tridymite	In vivo	Some positive data exist, but the data are not sufficient for classification
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

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Name	Route	Species	Value
Cristobalite	Inhalation	Human and animal	Carcinogenic.
Silica, vitreous	Not specified.	Mouse	Some positive data exist, but the data are not sufficient for classification
Siloxanes and Silicones, di-Me, reaction products with silica	Not specified.	Mouse	Some positive data exist, but the data are not sufficient for classification
Tridymite	Inhalation	Human and animal	Carcinogenic.
Quartz	Inhalation	Human and animal	Carcinogenic.

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

Name	Route	Value	Species	Test result	Exposure Duration
Silica, vitreous	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Silica, vitreous	Inhalation	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Silica, vitreous	Ingestion	Not classified for development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
Siloxanes and Silicones, di-Me, reaction products with silica	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Siloxanes and Silicones, di-Me, reaction products with silica	Ingestion	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Siloxanes and Silicones, di-Me, reaction products with 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 is currently available or the data is 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
Silica, vitreous	Inhalation	respiratory system silicosis	Not classified	Human	NOAEL Not available	occupational exposure
Siloxanes and Silicones, di-Me, reaction products with silica	Inhalation	respiratory system silicosis	Not classified	Human	NOAEL Not available	occupational exposure
Tridymite	Inhalation	silicosis	Causes damage to organs through prolonged or repeated exposure	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 is currently available or the data is 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 agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 12 are based on UN GHS calculation rules and classifications derived from 3M assessments.

12.1. Toxicity

No product test data available.

Material	CAS Nbr	Organism	Type	Exposure	Test endpoint	Test result
Siloxanes and silicones, Di-Me, vinyl group-terminated	68083-19-2		Data not available or insufficient for classification			
Cristobalite	14464-46-1		Data not available or insufficient for classification			
Silica, vitreous	60676-86-0	Common Carp	Experimental	72 hours	LC50	>10,000 mg/l
Siloxanes and silicones, di-Me	63148-62-9		Data not available or insufficient for classification			
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7		Data not available or insufficient for classification			
CI Pig Yellow 109	5045-40-9	Zebra Fish	Estimated	96 hours	LC50	>100 mg/l
CI Pig Yellow 109	5045-40-9	Water flea	Estimated	48 hours	Effect Level 50%	>100 mg/l
CI Pig Yellow 109	5045-40-9	Green algae	Estimated	72 hours	Effect Level 50%	>100 mg/l
CI Pig Yellow 109	5045-40-9	Green algae	Estimated	72 hours	No obs Effect Level	>100 mg/l
Tridymite	15468-32-3		Data not available or insufficient for classification			
Quartz	14808-60-7		Data not available or insufficient for classification			

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Siloxanes and silicones, Di-Me, vinyl group-terminated	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
Silica, vitreous	60676-86-0	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Siloxanes and silicones, di-Me	63148-62-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
CI Pig Yellow 109	5045-40-9	Estimated Biodegradation	28 days	BOD	5 % weight	OECD 301C - MITI test (I)
Tridymite	15468-32-3	Data not available or insufficient for	N/A	N/A	N/A	N/A

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		classification				
Cobalt aluminate blue spinel	1345-16-0	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Quartz	14808-60-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

12.3 : Bioaccumulative potential

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Siloxanes and silicones, Di-Me, vinyl group-terminated	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
Silica, vitreous	60676-86-0	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Siloxanes and silicones, di-Me	63148-62-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
CI Pig Yellow 109	5045-40-9	Estimated Bioconcentration		Bioaccumulation factor	7.4	Estimated: Bioconcentration factor
Tridymite	15468-32-3	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Cobalt aluminate blue spinel	1345-16-0	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Quartz	14808-60-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

12.4. Mobility in soil

Please contact manufacturer for more details

12.5. Results of the PBT and vPvB assessment

No information available at this time, contact manufacturer for more details

12.6. Other adverse effects

No information available.

SECTION 13: Disposal considerations**13.1 Waste treatment methods**

See Section 11.1 Information on toxicological effects

Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. If no other disposal options are available, waste product may be placed in a landfill properly designed for industrial waste.

The coding of a waste stream is based on the application of the product by the consumer. Since this is out of the control of 3M, no waste code(s) for products after use will be provided. Please refer to the European Waste Code (EWC - 2000/532/EC and amendments) to assign the correct waste code to your waste stream. Ensure national and/or regional regulations are complied with and always use a licensed waste contractor.

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EU waste code (product as sold)

180106* Chemicals consisting of or containing dangerous substances.

EU waste code (product container after use)

180107 Chemicals other than those mentioned in 18 01 06

SECTION 14: Transportation information

ADR/IMDG/IATA: Not restricted for transport.

SECTION 15: Regulatory information

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

Carcinogenicity

<u>Ingredient</u>	<u>CAS Nbr</u>	<u>Classification</u>	<u>Regulation</u>
Cristobalite	14464-46-1	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer
Quartz	14808-60-7	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer

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.

15.2. Chemical Safety Assessment

Not applicable

SECTION 16: Other information

List of relevant H statements

H372 Causes damage to organs through prolonged or repeated exposure.

Revision information:

Section 3: Composition/ Information of ingredients table information was added.
Section 3: Composition/ Information of ingredients table information was deleted.
Section 6: Accidental release clean-up information information was modified.
Section 6: Accidental release personal information information was modified.
Section 8: Occupational exposure limit table information was modified.
Section 8: Personal Protection - Respiratory Information information was deleted.
Section 8: Respiratory protection information information was added.
Section 9: Property description for optional properties information was modified.
Section 11: Acute Toxicity table information was modified.
Section 11: Reproductive Toxicity Table information was modified.
Section 11: Skin Sensitization Table information was modified.
Section 11: Target Organs - Repeated Table information was modified.
Section 12: Component ecotoxicity information information was modified.
Section 12: Persistence and Degradability information information was modified.
Section 12: Biocumulative potential information information was modified.
Section 13: Standard Phrase Category Waste GHS information was modified.
Section 15: Regulations - Inventories information was modified.

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 United Kingdom MSDSs are available at www.3M.com/uk



Safety Data Sheet

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Document group:	31-6670-9	Version number:	2.01
Revision date:	01/08/2016	Supersedes date:	16/03/2016
Transportation version number:	1.00 (21/05/2014)		

This Safety Data Sheet has been prepared in accordance with the REACH Regulation (EC) 1907/2006 and its modifications.

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

3M™ ESPE™ IMPRINT™ 4 PENTA™ HEAVY Base

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses

Dental Product

Restrictions on Use

For use only by dental professionals.

1.3. Details of the supplier of the safety data sheet

Address: 3M United Kingdom PLC, 3M Centre, Cain Road, Bracknell, Berkshire, RG12 8HT.
Telephone: +44 (0)1344 858 000
E Mail: tox.uk@mmm.com
Website: www.3M.com/uk

1.4. Emergency telephone number

+44 (0)1344 858 000

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

CLP REGULATION (EC) No 1272/2008

This product is a medical device as defined in Directive 93/42/EEC (MDD), which is invasive or used in direct physical contact with the human body, and therefore is exempt from the requirements of classification and labelling according to Regulation (EC) No. 1272/2008 (CLP; Article 1, paragraph 5). Although not required, the classification and label information, as applicable, is provided below.

CLASSIFICATION:

This material is not classified as hazardous according to Regulation (EC) No. 1272/2008, as amended, on classification, labelling, and packaging of substances and mixtures.

2.2. Label elements

3M™ ESPE™ IMPRINT™ 4 PENTAT™ HEAVY Base**CLP REGULATION (EC) No 1272/2008**

Not applicable

SUPPLEMENTAL INFORMATION**Supplemental Hazard Statements:**

EUH208

Contains Oils, mint, *Mentha arvensis piperascensis*, var. *piperascens*, Labiatae..
May produce an allergic reaction.**2.3. Other hazards**

For information on hazards and safe use, please consider the corresponding sections of this document.

SECTION 3: Composition/information on ingredients

Ingredient	CAS Nbr	EU Inventory	% by Wt	Classification
Silane treated quartz	None		50 - 60	
Siloxanes and silicones, Di-Me, vinyl group-terminated	68083-19-2		20 - 30	
Dimethyl methyl hydrogen silicone fluid	68037-59-2		5 - 15	
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7		1 - 10	
Glycols, polyethylene, methyl 3-[1,3,3,3-tetramethyl-1-(trimethylsiloxy)disiloxanyl]propyl ether	27306-78-1		< 2	Acute Tox. 4, H332; Eye Irrit. 2, H319 (Self Classified)
Silane, trimethyl-2-propenyl-	762-72-1	212-104-5	< 2	
Aluminium oxide	1344-28-1	215-691-6	< 2	
Oils, mint, <i>Mentha arvensis piperascensis</i> , var. <i>piperascens</i> , Labiatae.	68917-18-0		< 0.3	Acute Tox. 4, H302; Eye Irrit. 2, H319; Skin Sens. 1B, H317 (Self Classified)

Please see section 16 for the full text of any H statements referred to in this section

For information on ingredient occupational exposure limits or PBT or vPvB status, see sections 8 and 12 of this SDS

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

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

Skin contact

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

Eye contact

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

If swallowed

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

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

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. Extinguishing media

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

5.2. Special hazards arising from the substance or mixture

None inherent in this product.

Hazardous Decomposition or By-Products

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

5.3. Advice for fire-fighters

No special protective actions for fire-fighters are anticipated.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Ventilate the area with fresh air. 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.

6.4. Reference to other sections

Refer to Section 8 and Section 13 for more information

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Avoid contact with oxidising agents (eg. chlorine, chromic acid etc.) A no-touch technique is recommended. If skin contact occurs, wash skin with soap and water. If product contacts glove, remove and discard glove, wash hands immediately with soap and water and then re-glove.

7.2. Conditions for safe storage including any incompatibilities

Store away from heat. Store away from acids. Store away from strong bases. Store away from oxidising agents. Store away from amines.

7.3. Specific end use(s)

See information in Section 7.1 and 7.2 for handling and storage recommendations. See Section 8 for exposure controls and personal protection recommendations.

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
Aluminium oxide	1344-28-1	UK HSC	TWA(as inhalable dust):10 mg/m ³ ;TWA(as respirable dust):4 mg/m ³	

UK HSC : UK Health and Safety Commission
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling

Biological limit values

No biological limit values exist for any of the components listed in Section 3 of this safety data sheet.

8.2. Exposure controls

8.2.1. Engineering controls

Use in a well-ventilated area.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

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

Skin/hand protection

See Section 7.1 for additional information on skin protection.

Respiratory protection

Respiratory protection is not required.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Solid.
Specific Physical Form:	Paste
Appearance/Odour	Smell of mint, blue coloured paste
Odour threshold	<i>No data available.</i>
pH	<i>Not applicable.</i>
Boiling point/boiling range	<i>Not applicable.</i>
Melting point	<i>Not applicable.</i>
Flammability (solid, gas)	Not classified
Explosive properties	Not classified
Oxidising properties	Not classified
Flash point	No flash point
Autoignition temperature	<i>Not applicable.</i>

Flammable Limits(LEL)	<i>Not applicable.</i>
Flammable Limits(UEL)	<i>Not applicable.</i>
Vapour pressure	<i>No data available.</i>
Relative density	1.5 - 1.7 [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>
Evaporation rate	<i>No data available.</i>
Vapour density	<i>No data available.</i>
Decomposition temperature	<i>No data available.</i>
Viscosity	<i>No data available.</i>
Density	1.5 - 1.7 g/cm ³

9.2. Other information

Percent volatile	<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 agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 11 are based on UN GHS calculation rules and classifications derived from 3M assessments.

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

3M™ ESPE™ IMPRINT™ 4 PENTA™ HEAVY Base

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

Eye contact

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

Ingestion

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

Toxicological Data

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

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE >5,000 mg/kg
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
Siloxanes and silicones, Di-Me, vinyl group-terminated	Dermal	Rabbit	LD50 > 15,440 mg/kg
Siloxanes and silicones, Di-Me, vinyl group-terminated	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
Siloxanes and Silicones, di-Me, reaction products with silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
Siloxanes and Silicones, di-Me, reaction products with silica	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Siloxanes and Silicones, di-Me, reaction products with silica	Ingestion	Rat	LD50 > 5,110 mg/kg
Glycols,polyethylene,methyl 3-[1,3,3,3-tetramethyl-1-(trimethylsiloxy)disiloxanyl]propyl ether	Dermal	Rabbit	LD50 > 2,000 mg/kg
Glycols,polyethylene,methyl 3-[1,3,3,3-tetramethyl-1-(trimethylsiloxy)disiloxanyl]propyl ether	Inhalation-Dust/Mist (4 hours)	Rat	LC50 2 mg/l
Glycols,polyethylene,methyl 3-[1,3,3,3-tetramethyl-1-(trimethylsiloxy)disiloxanyl]propyl ether	Ingestion	Rat	LD50 > 2,000 mg/kg
Aluminium oxide	Dermal		LD50 estimated to be > 5,000 mg/kg
Aluminium oxide	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 2.3 mg/l
Aluminium oxide	Ingestion	Rat	LD50 > 5,000 mg/kg
Silane, trimethyl-2-propenyl-	Dermal	Professional judgement	LD50 estimated to be 2,000 - 5,000 mg/kg
Silane, trimethyl-2-propenyl-	Ingestion	similar compounds	LD50 estimated to be 2,000 - 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
Siloxanes and silicones, Di-Me, vinyl group-terminated	Rabbit	No significant irritation

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Siloxanes and Silicones, di-Me, reaction products with silica	Rabbit	No significant irritation
Glycols,polyethylene,methyl 3-[1,3,3,3-tetramethyl-1-(trimethylsiloxy)disiloxanyl]propyl ether	Rabbit	No significant irritation
Aluminium oxide	Rabbit	No significant irritation
Oils, mint, Mentha arvensis piperascensis, var. piperascens, Labiatae.	Rabbit	Mild irritant

Serious Eye Damage/Irritation

Name	Species	Value
Siloxanes and silicones, Di-Me, vinyl group-terminated	Rabbit	Mild irritant
Siloxanes and Silicones, di-Me, reaction products with silica	Rabbit	No significant irritation
Glycols,polyethylene,methyl 3-[1,3,3,3-tetramethyl-1-(trimethylsiloxy)disiloxanyl]propyl ether	Rabbit	Severe irritant
Aluminium oxide	Rabbit	No significant irritation
Oils, mint, Mentha arvensis piperascensis, var. piperascens, Labiatae.	In vitro data	Severe irritant

Skin Sensitisation

Name	Species	Value
Siloxanes and Silicones, di-Me, reaction products with silica	Human and animal	Not sensitising
Glycols,polyethylene,methyl 3-[1,3,3,3-tetramethyl-1-(trimethylsiloxy)disiloxanyl]propyl ether	Guinea pig	Not sensitising
Oils, mint, Mentha arvensis piperascensis, var. piperascens, Labiatae.	Guinea pig	Sensitising

Respiratory Sensitisation

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

Germ Cell Mutagenicity

Name	Route	Value
Siloxanes and Silicones, di-Me, reaction products with silica	In Vitro	Not mutagenic
Glycols,polyethylene,methyl 3-[1,3,3,3-tetramethyl-1-(trimethylsiloxy)disiloxanyl]propyl ether	In Vitro	Not mutagenic
Glycols,polyethylene,methyl 3-[1,3,3,3-tetramethyl-1-(trimethylsiloxy)disiloxanyl]propyl ether	In vivo	Not mutagenic
Aluminium oxide	In Vitro	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Siloxanes and Silicones, di-Me, reaction products with silica	Not specified.	Mouse	Some positive data exist, but the data are not sufficient for classification
Aluminium oxide	Inhalation	Rat	Not carcinogenic

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

Name	Route	Value	Species	Test result	Exposure Duration
Siloxanes and Silicones, di-Me, reaction products with silica	Ingestion	Not toxic to female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Siloxanes and Silicones, di-Me, reaction products with silica	Ingestion	Not toxic to male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Siloxanes and Silicones, di-Me, reaction products with silica	Ingestion	Not toxic to development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
Glycols,polyethylene,methyl 3-[1,3,3,3-tetramethyl-1-(trimethylsiloxy)disiloxanyl]propyl ether	Ingestion	Some positive reproductive/developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 450 mg/kg/day	prematuring & during gestation

3M™ ESPE™ IMPRINT™ 4 PENTA™ HEAVY Base**Target Organ(s)****Specific Target Organ Toxicity - single exposure**

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

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Siloxanes and Silicones, di-Me, reaction products with silica	Inhalation	respiratory system silicosis	All data are negative	Human	NOAEL Not available	occupational exposure
Aluminium oxide	Inhalation	pneumoconiosis pulmonary fibrosis	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure

Aspiration Hazard

For the component/components, either no data is currently available or the data is 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 agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 12 are based on UN GHS calculation rules and classifications derived from 3M assessments.

12.1. Toxicity

No product test data available.

Material	CAS Nbr	Organism	Type	Exposure	Test endpoint	Test result
Aluminium oxide	1344-28-1	Green algae	Experimental	72 hours	EC50	>100 mg/l
Aluminium oxide	1344-28-1	Fish	Experimental	96 hours	LC50	>100 mg/l
Aluminium oxide	1344-28-1	Water flea	Experimental	48 hours	EC50	>100 mg/l
Aluminium oxide	1344-28-1	Green algae	Experimental	72 hours	NOEC	>100 mg/l
Dimethyl methyl hydrogen silicone fluid	68037-59-2		Data not available or insufficient for classification			
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7		Data not available or insufficient for classification			
Glycols,polyethylene,methyl 3-[1,3,3,3-tetramethyl-1-(trimethylsilox	27306-78-1		Data not available or insufficient for classification			

3M™ ESPE™ IMPRINT™ 4 PENTA™ HEAVY Base

y)disiloxanyl]propyl ether						
Oils, mint, Mentha arvensis piperascensis, var. piperascens, Labiatae.	68917-18-0		Data not available or insufficient for classification			
Silane, trimethyl-2-propenyl-	762-72-1		Data not available or insufficient for classification			
Siloxanes and silicones, Di-Me, vinyl group-terminated	68083-19-2		Data not available or insufficient for classification			

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Siloxanes and silicones, Di-Me, vinyl group-terminated	68083-19-2	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Aluminium oxide	1344-28-1	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Oils, mint, Mentha arvensis piperascensis, var. piperascens, Labiatae.	68917-18-0	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Silane, trimethyl-2-propenyl-	762-72-1	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Glycols, polyethylene, methyl 3-[1,3,3,3-tetramethyl-1-(trimethylsiloxy)disiloxanyl]propyl ether	27306-78-1	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Dimethyl	68037-59-2	Data not	N/A	N/A	N/A	N/A

3M™ ESPE™ IMPRINT™ 4 PENTAT™ HEAVY Base

methyl hydrogen silicone fluid		available or insufficient for classification				
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12.3 : Bioaccumulative potential

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Oils, mint, Mentha arvensis piperascensis, var. piperascens, Labiatae.	68917-18-0	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, trimethyl-2-propenyl-	762-72-1	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Glycols, polyethylene, methyl 3-[1,3,3,3-tetramethyl-1-(trimethylsiloxy)disiloxy]propyl ether	27306-78-1	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Siloxanes and silicones, Di-Me, vinyl group-terminated	68083-19-2	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Aluminium oxide	1344-28-1	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. Results of the PBT and vPvB assessment

No information available at this time, contact manufacturer for more details

12.6. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

See Section 11.1 Information on toxicological effects

Dispose of completely cured (or polymerised) 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 polymerised may be placed in a landfill properly designed for industrial waste.

The coding of a waste stream is based on the application of the product by the consumer. Since this is out of the control of 3M, no waste code(s) for products after use will be provided. Please refer to the European Waste Code (EWC - 2000/532/EC and amendments) to assign the correct waste code to your waste stream. Ensure national and/or regional regulations are complied with and always use a licensed waste contractor.

EU waste code (product container after use)

180107 Chemicals other than those mentioned in 18 01 06

SECTION 14: Transportation information

ADR/IATA/IMDG: Not restricted for transport.

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 material are in compliance with the China "Measures on Environmental Management of New Chemical Substance". Certain restrictions may apply. Contact the selling division for additional information. The components of this product are in compliance with the new substance notification requirements of CEPA.

15.2. Chemical Safety Assessment

Not applicable

SECTION 16: Other information

List of relevant H statements

H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.

Revision information:

Section 12: Component ecotoxicity information information was modified.

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 United Kingdom MSDSs are available at www.3M.com/uk



Safety Data Sheet

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Document group:	31-6673-3	Version number:	4.00
Revision date:	01/08/2016	Supersedes date:	16/03/2016
Transportation version number:	1.00 (21/05/2014)		

This Safety Data Sheet has been prepared in accordance with the REACH Regulation (EC) 1907/2006 and its modifications.

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

3M™ ESPE™ IMPRINT™ 4 PENTA™ HEAVY Catalyst

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses

Dental Product

Restrictions on Use

For use only by dental professionals.

1.3. Details of the supplier of the safety data sheet

Address: 3M United Kingdom PLC, 3M Centre, Cain Road, Bracknell, Berkshire, RG12 8HT.
Telephone: +44 (0)1344 858 000
E Mail: tox.uk@mmm.com
Website: www.3M.com/uk

1.4. Emergency telephone number

+44 (0)1344 858 000

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

CLP REGULATION (EC) No 1272/2008

This product is a medical device as defined in Directive 93/42/EEC (MDD), which is invasive or used in direct physical contact with the human body, and therefore is exempt from the requirements of classification and labelling according to Regulation (EC) No. 1272/2008 (CLP; Article 1, paragraph 5). Although not required, the classification and label information, as applicable, is provided below.

CLASSIFICATION:

This material is not classified as hazardous according to Regulation (EC) No. 1272/2008, as amended, on classification, labelling, and packaging of substances and mixtures.

2.2. Label elements

3M™ ESPE™ IMPRINT™ 4 PENTAT™ HEAVY Catalyst**CLP REGULATION (EC) No 1272/2008**

Not applicable

2.3. Other hazards

For information on hazards and safe use, please consider the corresponding sections of this document.

SECTION 3: Composition/information on ingredients

Ingredient	CAS Nbr	EU Inventory	% by Wt	Classification
Nepheline syenite	37244-96-5		60 - 70	
Siloxanes and silicones, Di-Me, vinyl group-terminated	68083-19-2		15 - 25	
Siloxanes and silicones, di-Me	63148-62-9		5 - 15	
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7		1 - 5	

Please see section 16 for the full text of any H statements referred to in this section

For information on ingredient occupational exposure limits or PBT or vPvB status, see sections 8 and 12 of this SDS

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. 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-ProductsSubstanceCondition

3M™ ESPE™ IMPRINT™ 4 PENTA™ HEAVY Catalyst

Carbon monoxide.
Carbon dioxide.
Irritant vapours or gases.

During combustion.
During combustion.
During combustion.

5.3. Advice for fire-fighters

No special protective actions for fire-fighters are anticipated.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

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

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

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

6.4. Reference to other sections

Refer to Section 8 and Section 13 for more information

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.

7.3. Specific end use(s)

See information in Section 7.1 and 7.2 for handling and storage recommendations. See Section 8 for exposure controls and personal protection recommendations.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

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

Biological limit values

No biological limit values exist for any of the components listed in Section 3 of this safety data sheet.

8.2. Exposure controls

8.2.1. Engineering controls

Use in a well-ventilated area.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

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

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
Appearance/Odour	White coloured paste, slight characteristic odour
Odour threshold	<i>No data available.</i>
pH	<i>Not applicable.</i>
Boiling point/boiling range	<i>Not applicable.</i>
Melting point	<i>Not applicable.</i>
Flammability (solid, gas)	Not classified
Explosive properties	Not classified
Oxidising properties	Not classified
Flash point	No flash point
Autoignition temperature	<i>Not applicable.</i>
Flammable Limits(LEL)	<i>Not applicable.</i>
Flammable Limits(UEL)	<i>Not applicable.</i>
Vapour pressure	<i>No data available.</i>
Relative density	1.6 - 1.8 [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>
Evaporation rate	<i>Not applicable.</i>
Vapour density	<i>No data available.</i>
Decomposition temperature	<i>No data available.</i>
Viscosity	<i>No data available.</i>
Density	1.6 g/cm ³ - 1.8 g/cm ³

9.2. Other information

Percent volatile	<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 agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 11 are based on UN GHS calculation rules and classifications derived from 3M assessments.

11.1 Information on Toxicological effects

Signs and Symptoms of Exposure

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

Inhalation

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

Skin contact

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

Eye contact

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

Ingestion

May be harmful if swallowed.

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

Toxicological Data

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

Acute Toxicity

Name	Route	Species	Value
Overall product	Ingestion		No data available; calculated ATE2,000 - 5,000 mg/kg
Nepheline syenite	Dermal		LD50 estimated to be > 5,000 mg/kg
Nepheline syenite	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
Siloxanes and silicones, Di-Me, vinyl group-terminated	Dermal	Rabbit	LD50 > 15,440 mg/kg
Siloxanes and silicones, Di-Me, vinyl group-terminated	Ingestion	Rat	LD50 > 15,440 mg/kg
Siloxanes and silicones, di-Me	Dermal	Rabbit	LD50 > 19,400 mg/kg

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Siloxanes and silicones, di-Me	Ingestion	Rat	LD50 > 17,000 mg/kg
Siloxanes and Silicones, di-Me, reaction products with silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
Siloxanes and Silicones, di-Me, reaction products with silica	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Siloxanes and Silicones, di-Me, reaction products with silica	Ingestion	Rat	LD50 > 5,110 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Nepheline syenite	Professional judgement	No significant irritation
Siloxanes and silicones, Di-Me, vinyl group-terminated	Rabbit	No significant irritation
Siloxanes and silicones, di-Me	Rabbit	No significant irritation
Siloxanes and Silicones, di-Me, reaction products with silica	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Nepheline syenite	Professional judgement	Mild irritant
Siloxanes and silicones, Di-Me, vinyl group-terminated	Rabbit	Mild irritant
Siloxanes and silicones, di-Me	Rabbit	No significant irritation
Siloxanes and Silicones, di-Me, reaction products with silica	Rabbit	No significant irritation

Skin Sensitisation

Name	Species	Value
Siloxanes and Silicones, di-Me, reaction products with silica	Human and animal	Not sensitising

Respiratory Sensitisation

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

Germ Cell Mutagenicity

Name	Route	Value
Siloxanes and Silicones, di-Me, reaction products with silica	In Vitro	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Siloxanes and Silicones, di-Me, reaction products with 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
Siloxanes and Silicones, di-Me, reaction products with silica	Ingestion	Not toxic to female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Siloxanes and Silicones, di-Me, reaction products with silica	Ingestion	Not toxic to male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Siloxanes and Silicones, di-Me, reaction products with silica	Ingestion	Not toxic to development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis

3M™ ESPE™ IMPRINT™ 4 PENTAT™ HEAVY Catalyst**Target Organ(s)****Specific Target Organ Toxicity - single exposure**

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

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Siloxanes and Silicones, di-Me, reaction products with silica	Inhalation	respiratory system silicosis	All data are negative	Human	NOAEL Not available	occupational exposure

Aspiration Hazard

For the component/components, either no data is currently available or the data is 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 agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 12 are based on UN GHS calculation rules and classifications derived from 3M assessments.

12.1. Toxicity

No product test data available.

Material	CAS Nbr	Organism	Type	Exposure	Test endpoint	Test result
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7		Data not available or insufficient for classification			
Nepheline syenite	37244-96-5		Data not available or insufficient for classification			
Siloxanes and silicones, di-Me	63148-62-9		Data not available or insufficient for classification			
Siloxanes and silicones, Di-Me, vinyl group-terminated	68083-19-2		Data not available or insufficient for classification			

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Nepheline syenite	37244-96-5	Data not available or insufficient for	N/A	N/A	N/A	N/A

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		classification				
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Siloxanes and silicones, di-Me	63148-62-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Siloxanes and silicones, Di-Me, vinyl group-terminated	68083-19-2	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

12.3 : Bioaccumulative potential

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Nepheline syenite	37244-96-5	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Siloxanes and silicones, di-Me	63148-62-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Siloxanes and silicones, Di-Me, vinyl group-terminated	68083-19-2	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. Results of the PBT and vPvB assessment

No information available at this time, contact manufacturer for more details

12.6. Other adverse effects

No information available.

SECTION 13: Disposal considerations**13.1 Waste treatment methods**

See Section 11.1 Information on toxicological effects

Incinerate uncured product in a permitted waste incineration facility. Dispose of completely cured (or polymerised) material

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in a permitted industrial waste facility. If no other disposal options are available, waste product that has been completely cured or polymerised may be placed in a landfill properly designed for industrial waste.

The coding of a waste stream is based on the application of the product by the consumer. Since this is out of the control of 3M, no waste code(s) for products after use will be provided. Please refer to the European Waste Code (EWC - 2000/532/EC and amendments) to assign the correct waste code to your waste stream. Ensure national and/or regional regulations are complied with and always use a licensed waste contractor.

EU waste code (product as sold)

180107 Chemicals other than those mentioned in 18 01 06

SECTION 14: Transportation information

ADR/IATA/IMDG: Not restricted for transport.

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 material are in compliance with the China "Measures on Environmental Management of New Chemical Substance". Certain restrictions may apply. Contact the selling division for additional information. The components of this product are in compliance with the new substance notification requirements of CEPA.

15.2. Chemical Safety Assessment

Not applicable

SECTION 16: Other information

Revision information:

Section 12: Persistence and Degradability information information was modified.

Section 12:Biocumulative potential information information was modified.

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 United Kingdom MSDSs are available at www.3M.com/uk