



Safety Data Sheet

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Document group:	31-6670-9	Version number:	1.00
Revision date:	21/05/2014	Supersedes date:	Initial issue.
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

1.3. Details of the supplier of the substance or mixture

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

CLASSIFICATION:

This material is exempt from hazard classification according to Regulation (EC) No. 1272/2008, as amended, on classification, labelling, and packaging of substances and mixtures.

Dangerous substances(67/548/EEC)/preparations(1999/45/EC) directive

2.2. Label elements

CLP REGULATION (EC) No 1272/2008

Not applicable

1% of the mixture consists of components of unknown acute oral toxicity.

Dangerous substances(67/548/EEC)/preparations(1999/45/EC) directive

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

Not applicable

Notes on labelling

This product is exempt from labelling per Directive 1999/45/EC as it is defined as a medical device according to Directive 93/42/EEC and is invasive or comes into contact with the human body.

2.3. Other hazards

None known.

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	Xn:R20 (Self Classified) Acute Tox. 4, H332 (Self Classified)
Dimethyl siloxane, reaction product 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	Xn:R20; Xi:R36 (Self Classified) Acute Tox. 4, H332; Eye Irrit. 2, H319 (Self Classified)
Aluminium Oxide	1344-28-1	EINECS 215-691-6	< 2	
Silane, trimethyl-2-propenyl-	762-72-1	EINECS 212-104-5	< 2	
Oils, mint, Mentha arvensis piperascensis, var. piperascens, Labiatae.	68917-18-0		< 0.3	Xn:R22; Xi:R36; R43 (Self Classified) Acute Tox. 4, H302; Eye Irrit. 2, H319; Skin Sens. 1B, H317 (Self Classified)

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

Please refer to section 15 for the any applicable Notas that have been applied to the above components

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 unusual fire or explosion hazards 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

Avoid prolonged or repeated skin contact. 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.

7.2. Conditions for safe storage including any incompatibilities

Store away from heat.

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**

Ingredient	CAS Nbr	Agency	Limit type	Additional comments
Aluminium Oxide	1344-28-1	Health and Safety Comm. (UK)	TWA(as inhalable dust):10 mg/m ³ ;TWA(as respirable dust):4 mg/m ³	

Health and Safety Comm. (UK) : 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

No chemical protective gloves are required. 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 [<i>Ref Std:WATER=1</i>]
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

9.2. Other information

Volatile organic compounds (VOC)	<i>Not applicable.</i>
Percent volatile	<i>Not applicable.</i>
VOC less H2O & exempt solvents	<i>Not applicable.</i>

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

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

10.2 Chemical stability

Stable.

10.3 Possibility of hazardous reactions

Hazardous polymerisation will not occur.

10.4 Conditions to avoid

Heat.

10.5 Incompatible materials

None known.

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. 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	Inhalation-Dust/Mist (4 hours)	Rat	LC50 4.2 mg/l
Dimethyl methyl hydrogen silicone fluid	Ingestion	Rat	LD50 > 2,000 mg/kg
Dimethyl siloxane, reaction product with silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
Dimethyl siloxane, reaction product with silica	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Dimethyl siloxane, reaction product 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
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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Dimethyl siloxane, reaction product 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
Dimethyl siloxane, reaction product 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
Dimethyl siloxane, reaction product with silica	Human and animal	Not sensitizing
Glycols,polyethylene,methyl 3-[1,3,3,3-tetramethyl-1-(trimethylsiloxy)disiloxanyl]propyl ether	Guinea pig	Not sensitizing
Oils, mint, Mentha arvensis piperascensis, var. piperascens, Labiatae.	Guinea pig	Sensitising

Respiratory Sensitisation

Name	Species	Value

Germ Cell Mutagenicity

Name	Route	Value
Dimethyl siloxane, reaction product 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
Dimethyl siloxane, reaction product 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
Dimethyl siloxane, reaction product with silica	Ingestion	Not toxic to female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Dimethyl siloxane, reaction product with silica	Ingestion	Not toxic to male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Dimethyl siloxane, reaction product 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

Target Organ(s)

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

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Dimethyl siloxane, reaction product 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

Name	Value

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			
Dimethyl siloxane, reaction product with silica	67762-90-7		Data not available or insufficient for classification			
Glycols,polyethylene,methyl 3-[1,3,3,3-tetramethyl-1-(trimethylsilyloxy)disiloxanyl]propyl ether	27306-78-1		Data not available or insufficient for classification			

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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

No test data available.

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Dimethyl methyl hydrogen silicone fluid	68037-59-2	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Dimethyl siloxane, reaction product with silica	67762-90-7	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-(trimethylsilyloxy)disiloxanyl]propyl ether	27306-78-1	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
Siloxanes and silicones, Di-Me, vinyl	68083-19-2	Data not available or insufficient for	N/A	N/A	N/A	N/A

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group-terminated		classification				
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12.3 : Bioaccumulative potential

No test data available.

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Dimethyl methyl hydrogen silicone fluid	68037-59-2	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Dimethyl siloxane, reaction product with silica	67762-90-7	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
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
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

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 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/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**

All applicable chemical ingredients in this material are listed on the European Inventory of Existing Chemical Substances (EINECS), or are exempt polymers whose monomers are listed on EINECS. Contact 3M for more information. The components of this 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.

List of relevant R-phrases

R20	Harmful by inhalation.
R22	Harmful if swallowed.
R36	Irritating to eyes.
R43	May cause sensitisation by skin contact.

Revision information:

No revision information is available.

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:	2.00
Revision date:	21/05/2014	Supersedes date:	21/05/2014
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

1.3. Details of the supplier of the substance or mixture

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

CLASSIFICATION:

This material is exempt from hazard classification according to Regulation (EC) No. 1272/2008, as amended, on classification, labelling, and packaging of substances and mixtures.

Dangerous substances(67/548/EEC)/preparations(1999/45/EC) directive

This product is not classified as hazardous according to EU Directive 1999/45/EC.

2.2. Label elements

CLP REGULATION (EC) No 1272/2008

Not applicable

Dangerous substances(67/548/EEC)/preparations(1999/45/EC) directive

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

Not applicable

Notes on labelling

This product is exempt from labelling per Directive 1999/45/EC as it is defined as a medical device according to Directive 93/42/EEC and is invasive or comes into contact with the human body.

2.3. Other hazards

None known.

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	
Dimethyl siloxane, reaction product with silica	67762-90-7		1 - 5	

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

Please refer to section 15 for the any applicable Notas that have been applied to the above components

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-Products

Substance	Condition
Formaldehyde	During combustion.
Carbon monoxide.	During combustion.
Carbon dioxide.	During combustion.
Irritant vapours or gases.	During combustion.

5.3. Advice for fire-fighters

No unusual fire or explosion hazards 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.

7.2. Conditions for safe storage including any incompatibilities

Store away from heat.

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

No chemical protective gloves are required. 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 [<i>Ref Std: WATER=1</i>]
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

Volatile organic compounds (VOC)	<i>Not applicable.</i>
Percent volatile	<i>Not applicable.</i>
VOC less H ₂ O & exempt solvents	<i>Not applicable.</i>

SECTION 10: Stability and reactivity

10.1 Reactivity

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

10.2 Chemical stability

Stable.

10.3 Possibility of hazardous reactions

Hazardous polymerisation will not occur.

10.4 Conditions to avoid

Heat.

10.5 Incompatible materials

None known.

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

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

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Nepheline syenite		No significant irritation
Siloxanes and silicones, Di-Me, vinyl group-terminated	Rabbit	No significant irritation
Siloxanes and silicones, di-Me	Rabbit	No significant irritation
Dimethyl siloxane, reaction product with silica	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Nepheline syenite		Mild irritant
Siloxanes and silicones, Di-Me, vinyl group-terminated	Rabbit	Mild irritant
Siloxanes and silicones, di-Me	Rabbit	No significant irritation
Dimethyl siloxane, reaction product with silica	Rabbit	No significant irritation

Skin Sensitisation

Name	Species	Value
Dimethyl siloxane, reaction product with silica	Human and animal	Not sensitizing

Respiratory Sensitisation

Name	Species	Value

Germ Cell Mutagenicity

Name	Route	Value
Dimethyl siloxane, reaction product with silica	In Vitro	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Dimethyl siloxane, reaction product 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
Dimethyl siloxane, reaction product with silica	Ingestion	Not toxic to female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Dimethyl siloxane, reaction product with silica	Ingestion	Not toxic to male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Dimethyl siloxane, reaction product with silica	Ingestion	Not toxic to development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis

Target Organ(s)

3M™ ESPE™ IMPRINT™ 4 PENTA™ HEAVY Catalyst**Specific Target Organ Toxicity - single exposure**

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Dimethyl siloxane, reaction product with silica	Inhalation	respiratory system silicosis	All data are negative	Human	NOAEL Not available	occupational exposure

Aspiration Hazard

Name	Value

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
Dimethyl siloxane, reaction product 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

No test data available.

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Siloxanes and silicones, di-Me	63148-62-9	Data not available or insufficient for	N/A	N/A	N/A	N/A

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		classification				
Dimethyl siloxane, reaction product 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, vinyl group-terminated	68083-19-2	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Nepheline syenite	37244-96-5	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

12.3 : Bioaccumulative potential

No test data available.

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Siloxanes and silicones, di-Me	63148-62-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Dimethyl siloxane, reaction product 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, vinyl group-terminated	68083-19-2	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Nepheline syenite	37244-96-5	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

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

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:

Revision Changes:

Section 1: Initial issue message information was modified.

Section 14: Transportation classification information was added.

DISCLAIMER: The information on this Safety Data Sheet is based on our experience and is correct to the best of our knowledge at the date of publication, but we do not accept any liability for any loss, damage or injury resulting from its use (except as required by law). The information may not be valid for any use not referred to in this Data Sheet or use of the product in combination with other materials. For these reasons, it is important that customers carry out their own test to satisfy themselves as to the suitability of the product for their own intended applications.

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