



Safety Data Sheet

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Document group:	16-2762-9	Version number:	5.00
Revision date:	02/06/2017	Supersedes date:	24/05/2013
Transportation version number: 4.00 (06/01/2018)			

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

PROTEMP II TEMPORARY

Product Identification Numbers

70-2011-1044-5	70-2011-1323-3	70-2011-1324-1
7000054837	7000129060	7000054860

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:

16-2626-6, 16-2761-1, 34-2713-5

TRANSPORTATION INFORMATION

70-2011-1044-5, 70-2011-1323-3, 70-2011-1324-1

PROTEMP II TEMPORARY

Not hazardous for transportation

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:

Organic Peroxide, Type D - Org. Perox. CD; H242

Skin Sensitization, Category 1B - Skin Sens. 1B; H317

Hazardous to the Aquatic Environment (Chronic), Category 4 - Aquatic Chronic 4; H413

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:

H242

Heating may cause a fire.

H317

May cause an allergic skin reaction.

H413

May cause long lasting harmful effects to aquatic life.

PRECAUTIONARY STATEMENTS

Prevention:

P210A

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P234

Keep only in original container.

P280B

Wear protective gloves and eye/face protection.

Response:

P333 + P313

If skin irritation or rash occurs: Get medical advice/attention.

Storage:

P411 + P235

Store at temperatures not exceeding 5C/40F. Keep cool.

Disposal:

P501	Dispose of contents/container in accordance with applicable local/regional/national/international regulations.
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Revision information:

Kit: Component document group number(s) information was modified.
Company Telephone information was added.
Section 1: Product identification numbers information was modified.
Section 01: SAP Material Numbers information was added.
Section 1: Restrictions on use information information was added.
Section 2: H phrase reference information was added.
Label: CLP Classification information was added.
Label: CLP Environmental Hazard Statements information was added.
Section 02: Label Elements: CLP Medical Device information was added.
Label: CLP Precautionary - Disposal information was added.
Label: CLP Precautionary - Prevention information was added.
Label: CLP Precautionary - Response information was added.
Label: CLP Precautionary - Storage information was added.
Label: Graphic Text information was deleted.
Label: Graphic information was added.
Label: Graphic information was deleted.
Label: Signal Word information was added.
Remark (phrase) information was deleted.
Section 2: Risk phrase information information was deleted.
Safety phrase information was deleted.



Safety Data Sheet

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Document group:	16-2761-1	Version number:	5.01
Revision date:	16/06/2017	Supersedes date:	06/06/2017
Transportation version number:	1.00 (13/03/2012)		

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™ PROTEMP II 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.
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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:

Hazardous to the Aquatic Environment (Chronic), Category 4 - Aquatic Chronic 4; H413

For full text of H phrases, see Section 16.

2.2. Label elements**CLP REGULATION (EC) No 1272/2008****HAZARD STATEMENTS:**

H413 May cause long lasting harmful effects to aquatic life.

PRECAUTIONARY STATEMENTS**Disposal:**

P501 Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

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
Bisphenol A dimethacrylate, ethoxylated	41637-38-1			50 - 70	Aquatic Chronic 4, H413
Glass powder (65997-17-3), surface modified with 2-propenoic acid, 2 methyl-3-(trimethoxysilyl)propyl ester (2530-85-0), bulk material	None			20 - 30	Substance not classified as hazardous
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	68909-20-6	272-697-1		10 - 20	Substance with a Community level exposure limit in the workplace
Poly(vinyl chloride-co-isobutyl vinyl ether)	25154-85-2			1 - 5	Substance not classified as hazardous

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-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. 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 release to the environment.

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

If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient	CAS Nbr	Agency	Limit type	Additional comments
Silicon dioxide	68909-20-6	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	Different coloured pastes, slight acrylate odour
Odour threshold	<i>No data available.</i>
pH	<i>No data available.</i>
Boiling point/boiling range	<i>Not applicable.</i>
Melting point	<i>No data available.</i>
Flammability (solid, gas)	Not classified
Explosive properties	Not classified
Oxidising properties	Not classified
Flash point	Flash point > 93 °C (200 °F)
Autoignition temperature	<i>No data available.</i>
Flammable Limits(LEL)	<i>Not applicable.</i>
Flammable Limits(UEL)	<i>Not applicable.</i>

Vapour pressure	<i>Not applicable.</i>
Relative density	approximately 1 [Ref Std: WATER=1]
Water solubility	Nil
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>Not applicable.</i>
Decomposition temperature	<i>No data available.</i>
Viscosity	30,000 - 150,000 mPa-s

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

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

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

Eye contact

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

Ingestion

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

Toxicological Data

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

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE >5,000 mg/kg
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
Bisphenol A dimethacrylate, ethoxylated	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
Bisphenol A dimethacrylate, ethoxylated	Ingestion	Rat	LD50 > 2,000 mg/kg
Glass powder (65997-17-3), surface modified with 2-propenoic acid, 2 methyl-.3-(trimethoxysilyl)propyl ester (2530-85-0), bulk material	Dermal		LD50 estimated to be > 5,000 mg/kg
Glass powder (65997-17-3), surface modified with 2-propenoic acid, 2 methyl-.3-(trimethoxysilyl)propyl ester (2530-85-0), bulk material	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	Ingestion	Rat	LD50 > 5,110 mg/kg
Poly(vinyl chloride-co-isobutyl vinyl ether)	Dermal	Professional judgement	LD50 estimated to be 2,000 - 5,000 mg/kg
Poly(vinyl chloride-co-isobutyl vinyl ether)	Ingestion	Rat	LD50 > 2,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Overall product	Rabbit	No significant irritation
Glass powder (65997-17-3), surface modified with 2-propenoic acid, 2 methyl-.3-(trimethoxysilyl)propyl ester (2530-85-0), bulk material	Professional judgement	No significant irritation
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Glass powder (65997-17-3), surface modified with 2-propenoic acid, 2 methyl-.3-(trimethoxysilyl)propyl ester (2530-85-0), bulk material	Professional judgement	No significant irritation
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	Rabbit	No significant irritation

Skin Sensitisation

Name	Species	Value
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Overall product	Guinea pig	Not classified
Bisphenol A dimethacrylate, ethoxylated	Guinea pig	Not classified
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis 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
Bisphenol A dimethacrylate, ethoxylated	In Vitro	Not mutagenic
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	In Vitro	Not mutagenic
Poly(vinyl chloride-co-isobutyl vinyl ether)	In Vitro	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis 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
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	Ingestion	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis 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
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	Inhalation	respiratory system silicosis	Not classified	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
Bisphenol A dimethacrylate, ethoxylated	41637-38-1		Data not available or insufficient for classification			
Glass powder (65997-17-3), surface modified with 2-propenoic acid, 2-methyl-,3-(trimethoxysilyl)propyl ester (2530-85-0), bulk material	None		Data not available or insufficient for classification			
Poly(vinyl chloride-co-isobutyl vinyl ether)	25154-85-2	Water flea	Experimental	48 hours	EC50	>100 mg/l
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	68909-20-6	Algae	Estimated	72 hours	EC50	>100 mg/l

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Poly(vinyl chloride-co-isobutyl vinyl ether)	25154-85-2	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Bisphenol A dimethacrylate, ethoxylated	41637-38-1	Calculated Biodegradation	28 days	BOD	38 % weight	OECD 301C - MITI test (I)
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	68909-20-6	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

3M™ ESPE™ PROTEMP II BASE

Glass powder (65997-17-3), surface modified with 2-propenoic acid, 2-methyl-.3-(trimethoxysilyl)propyl ester (2530-85-0), bulk material	None	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
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12.3 : Bioaccumulative potential

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Poly(vinyl chloride-co-isobutyl vinyl ether)	25154-85-2	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Bisphenol A dimethacrylate, ethoxylated	41637-38-1	Calculated Bioconcentration		Bioaccumulation factor	6.7	Estimated: Bioconcentration factor
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	68909-20-6	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Glass powder (65997-17-3), surface modified with 2-propenoic acid, 2-methyl-.3-(trimethoxysilyl)propyl ester (2530-85-0), bulk material	None	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. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

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/IMDG/IATA: 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 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**

H413 May cause long lasting harmful effects to aquatic life.

Revision information:

Section 12: Component ecotoxicity information information was modified.

Section 12: Persistence and Degradability information information was modified.

Section 12: Bioaccumulative 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



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Transportation version number:	1.00 (24/05/2013)		

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™PROTEMP™ II CATALYST Paste Part I

Product Identification Numbers

70-2011-0358-0

7000030666

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.
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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.

3M™ ESPE™PROTEMP™ II CATALYST Paste Part I

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

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	EC No.	REACH Registration No.	% by Wt	Classification
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxy)]bisethyldiacetate	19224-29-4	242-895-2	01-2120104948-51	55 - 75	Substance not classified as hazardous
2H-1,2,6-Thiadiazine-3,5(4H,6H)-dione, 2,6-dibutyl-4-(2-methylpropyl)-, 1,1-dioxide	83789-26-8	280-850-9		20 - 30	Substance not classified as hazardous
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5			5 - 10	Substance with a Community level exposure limit in the workplace
(1-methylethylidene)bis(4,1-phenyleneoxy-2,1-ethanediyl)(1-phenylenoxy-2,2'ethoxyethanediyl)bisacetate	None			1 - 7	Substance not classified as hazardous

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

No need for first aid is anticipated.

Skin contact

Wash with soap and water. If you feel unwell, 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

Evacuate area. 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.

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

No special storage requirements.

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

3M™ ESPE™ PROTEMP™ II CATALYST Paste Part I

Occupational exposure limits

If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient	CAS Nbr	Agency	Limit type	Additional comments
Silicon dioxide	112945-52-5	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	White & colourless paste, sweet plasticizer odour
Odour threshold	No data available.
pH	Not applicable.
Boiling point/boiling range	Not applicable.
Melting point	No data available.
Flammability (solid, gas)	Not classified
Explosive properties	Not classified
Oxidising properties	Not classified
Flash point	No flash point
Autoignition temperature	No data available.
Flammable Limits(LEL)	Not applicable.
Flammable Limits(UEL)	Not applicable.
Vapour pressure	Not applicable.
Relative density	>=1 [Ref Std:WATER=1]
Water solubility	Nil

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Solubility- non-water	No data available.
Partition coefficient: n-octanol/water	Not applicable.
Evaporation rate	Not applicable.
Vapour density	Not applicable.
Decomposition temperature	No data available.
Viscosity	30,000 - 150,000 mPa-s
Density	Not applicable.

9.2. Other information

Percent volatile	Not applicable.
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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

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

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

3M™ ESPE™PROTEMP™ II CATALYST Paste Part I**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	Dermal		No data available; calculated ATE2,000 - 5,000 mg/kg
Overall product	Ingestion		No data available; calculated ATE2,000 - 5,000 mg/kg
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxy)]bisethyldiacetate	Dermal	Professional judgement	LD50 estimated to be 2,000 - 5,000 mg/kg
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxy)]bisethyldiacetate	Ingestion	Rat	LD50 > 2,000 mg/kg
2H-1,2,6-Thiadiazine-3,5(4H,6H)-dione, 2,6-dibutyl-4-(2-methylpropyl)-, 1,1-dioxide	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
2H-1,2,6-Thiadiazine-3,5(4H,6H)-dione, 2,6-dibutyl-4-(2-methylpropyl)-, 1,1-dioxide	Ingestion	Rat	LD50 > 2,000 mg/kg
Synthetic amorphous silica, fumed, crystalline-free	Dermal	Rabbit	LD50 > 5,000 mg/kg
Synthetic amorphous silica, fumed, crystalline-free	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Synthetic amorphous silica, fumed, crystalline-free	Ingestion	Rat	LD50 > 5,110 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxy)]bisethyldiacetate	In vitro data	No significant irritation
Synthetic amorphous silica, fumed, crystalline-free	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxy)]bisethyldiacetate	In vitro data	No significant irritation
Synthetic amorphous silica, fumed, crystalline-free	Rabbit	No significant irritation

Skin Sensitisation

Name	Species	Value
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxy)]bisethyldiacetate	Mouse	Not classified
Synthetic amorphous silica, fumed, crystalline-free	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

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Name	Route	Value
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxy)]bisethyldiacetate	In Vitro	Not mutagenic
Synthetic amorphous silica, fumed, crystalline-free	In Vitro	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Synthetic amorphous silica, fumed, crystalline-free	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
Synthetic amorphous silica, fumed, crystalline-free	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Synthetic amorphous silica, fumed, crystalline-free	Ingestion	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Synthetic amorphous silica, fumed, crystalline-free	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
Synthetic amorphous silica, fumed, crystalline-free	Inhalation	respiratory system silicosis	Not classified	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
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxy)]bisethyldiacetate	19224-29-4	Green algae	Experimental	72 hours	NOEC	>100 mg/l

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e						
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxy)]bisethyldiacetate	19224-29-4	Green algae	Experimental	72 hours	EC50	>100 mg/l
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5	Green Algae	Experimental	72 hours	NOEC	60 mg/l
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5	Green Algae	Experimental	72 hours	EC50	>100 mg/l
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5	Zebra Fish	Experimental	96 hours	LC50	>100 mg/l
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5	Water flea	Experimental	24 hours	EC50	>100 mg/l
2H-1,2,6-Thiadiazine-3,5(4H,6H)-dione, 2,6-dibutyl-4-(2-methylpropyl)-, 1,1-dioxide	83789-26-8		Data not available or insufficient for classification			

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxy)]bisethyldiacetate	19224-29-4	Experimental Biodegradation	28 days	CO2 evolution	8-13 % weight	OECD 301B - Modified sturm or CO2
2H-1,2,6-Thiadiazine-3,5(4H,6H)-dione, 2,6-dibutyl-4-(2-methylpropyl)-, 1,1-dioxide	83789-26-8	Estimated Biodegradation	28 days	BOD	47 % weight	OECD 301C - MITI test (I)
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5	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
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3M™ ESPE™PROTEMP™ II CATALYST Paste Part I

2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxy)]bisethyldiacetate	19224-29-4	Estimated Bioconcentration		Log Kow	7.16	Other methods
2H-1,2,6-Thiadiazine-3,5(4H,6H)-dione, 2,6-dibutyl-4-(2-methylpropyl)-, 1,1-dioxide	83789-26-8	Estimated Bioconcentration		Bioaccumulation factor	115	Estimated: Bioconcentration factor
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5	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

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)

180107 Chemicals other than those mentioned in 18 01 06

SECTION 14: Transportation information

70-2011-0358-0

Not hazardous for transportation

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

Global inventory status

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

15.2. Chemical Safety Assessment

Not applicable

SECTION 16: Other information**Revision information:**

Company Telephone information was added.

Section 1: Product name information was modified.

Section 01: SAP Material Numbers information was added.

Section 1: Restrictions on use information information was added.

Section 2: Indication of danger information information was deleted.

Label: CLP Classification information was modified.

Section 02: Label Elements: CLP Medical Device information was added.

Label: Graphic Text information was deleted.

Label: Graphic information was deleted.

Section 2: Label ingredient information information was deleted.

Section 2: Other hazards phrase information was modified.

Section 2: R phrase reference information was deleted.

Remark (phrase) information was deleted.

Risk phrase - None information was deleted.

Section 3: Composition/ Information of ingredients table information was added.

Section 3: Composition/ Information of ingredients table information was deleted.

Section 3: Reference to H statement explanation in Section 016 information was added.

Section 3: Reference to R and H statement explanation in Section 16 information was deleted.

Section 3: Reference to section 15 for Nota info information was deleted.

Section 4: First aid for inhalation information information was modified.

Section 4: First aid for skin contact information information was modified.

Section 5: Fire - Advice for fire fighters information information was modified.

Section 5: Fire - Extinguishing media information information was modified.

Section 5: Fire - Special hazards information information was modified.

Section 6: Accidental release clean-up information information was modified.

Section 6: Accidental release personal information information was modified.

Section 7: Conditions safe storage information was modified.

Section 7: Precautions safe handling information information was modified.

Section 8: Appropriate Engineering controls information information was modified.

Section 8: BLV information was added.

Section 8: Eye/face protection text information was deleted.

Section 8: mg/m³ key information was deleted.

Section 8: Occupational exposure limit table information was added.

Section 8: Occupational exposure limit table information was modified.

OEL Reg Agency Desc information was modified.

Section 8: Personal Protection - Eye information information was modified.

Section 8: Personal Protection - Respiratory Information information was deleted.

Section 8: Personal Protection - Skin/hand information information was modified.

Section 8: ppm key information was deleted.

Section 8: Respiratory protection information information was added.

Section 9: Flammability (solid, gas) information information was modified.

Section 9: Property description for optional properties information was added.

Section 9: Property description for optional properties information was deleted.

Section 9: Viscosity information information was modified.

Section 10: Hazardous decomposition products during combustion text information was added.

Section 11: Acute Toxicity table information was modified.

Section 11: Aspiration Hazard Table information was deleted.

Section 11: Aspiration Hazard text information was added.

Section 11: Carcinogenicity Table information was modified.

Section 11: Classification disclaimer information was added.

Section 11: Classification disclaimer information was deleted.

Section 11: Disclosed components not in tables text information was added.

Section 11: Germ Cell Mutagenicity Table information was modified.

Section 11: Health Effects - Ingestion information information was modified.

Section 11: Health Effects - Skin information information was modified.

Section 11: Reproductive and/or Developmental Effects text information was added.

Section 11: Reproductive Toxicity Table information was modified.

Section 11: Respiratory Sensitization Table information was deleted.

Section 11: Respiratory Sensitization text information was added.

Section 11: Serious Eye Damage/Irritation Table information was modified.

Section 11: Single exposure may cause standard phrases information was deleted.

Section 11: Skin Corrosion/Irritation Table information was modified.

Section 11: Skin Sensitization Table information was modified.

Section 11: Specific Target Organ Toxicity - single exposure text information was added.

Section 11: Target Organs - Repeated Table information was modified.

Section 11: Target Organs - Single Table information was deleted.

Section 12: Acute aquatic hazard information information was deleted.

Section 12: Chronic aquatic hazard information information was deleted.

Section 12: Classification Warning information was added.

Section 12: Classification Warning information was deleted.

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: 13.1. Waste disposal note information was modified.

Section 13: EU waste code (product as sold) information information was modified.

Section 13: Standard Phrase Category Waste GHS information was modified.

Section 15: Carcinogenicity information information was deleted.

Section 15: Regulations - Inventories information was modified.

Section 15: Symbol information information was deleted.

Section 16: List of relevant R phrase information information was deleted.

Section 16: List of relevant R-phrases information was deleted.

Two-column table displaying the unique list of H Codes and statements (std phrases) for all components of the given material. 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:	34-2713-5	Version number:	1.00
Revision date:	02/06/2017	Supersedes date:	Initial issue.
Transportation version number:	1.00 (02/06/2017)		

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™PROTEMP™ II CATALYST Paste Part II

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:

Organic Peroxide, Type D - Org. Perox. CD; H242
Skin Sensitization, Category 1B - Skin Sens. 1B; H317

For full text of H phrases, see Section 16.

3M™ ESPE™ PROTEMP™ II CATALYST Paste Part II

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
Lauroyl Peroxide	105-74-8	20 - 30

HAZARD STATEMENTS:

H242	Heating may cause a fire.
H317	May cause an allergic skin reaction.

PRECAUTIONARY STATEMENTS

Prevention:

P210A	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P234	Keep only in original container.
P280B	Wear protective gloves and eye/face protection.

Response:

P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
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Storage:

P411 + P235	Store at temperatures not exceeding 5C/40F. Keep cool.
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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	EC No.	REACH Registration No.	% by Wt	Classification
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxy)]bisethyldiacetate	19224-29-4	242-895-2	01-2120104948-51	60 - 80	Substance not classified as hazardous
Lauroyl Peroxide	105-74-8	203-326-3		20 - 30	Org. Perox. CD, H242 Skin Sens. 1B, H317
(1-methylethylidene)bis(4,1-phenyleneoxy-2,1-ethanediyl)(1-phenyleneoxy-				1 - 7	Substance not classified as hazardous

3M™ ESPE™PROTEMP™ II CATALYST Paste Part II

2,2'ethoxyethanediyl)bisacetate					
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5			1 - 5	Substance with a Community level exposure limit in the workplace

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

Closed containers exposed to heat from fire may build pressure and explode.

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**

3M™ ESPE™ PROTEMP™ II CATALYST Paste Part II

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 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

Collect as much of the spilled material as possible using non-sparking tools. 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. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Avoid breathing dust/fume/gas/mist/vapours/spray. 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

Protect from sunlight. Store away from heat. Store at temperatures not exceeding 5C/40F. Keep cool. Keep only in original container. Store away from other materials. Keep/store away from clothing and other combustible materials.

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
Silicon dioxide	112945-52-5	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.

Applicable Norms/Standards

Use eye protection conforming to EN 166

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 & colourless paste, sweet plasticizer odour
Odour threshold	No data available.
pH	Not applicable.
Boiling point/boiling range	Not applicable.
Melting point	No data available.
Flammability (solid, gas)	Organic Peroxide: Type D.
Explosive properties	Not classified
Oxidising properties	Not classified
Flash point	No flash point
Autoignition temperature	No data available.
Flammable Limits(LEL)	Not applicable.
Flammable Limits(UEL)	Not applicable.
Vapour pressure	Not applicable.
Relative density	≥ 1 [Ref Std: WATER=1]
Water solubility	Nil
Solubility- non-water	No data available.
Partition coefficient: n-octanol/water	Not applicable.
Evaporation rate	Not applicable.
Vapour density	Not applicable.
Decomposition temperature	No data available.
Viscosity	30,000 - 150,000 mPa-s
Density	Not applicable.

9.2. Other information

Percent volatile	Not applicable.
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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

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

May be harmful in contact with skin. 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

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	Dermal		No data available; calculated ATE2,000 - 5,000 mg/kg

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Overall product	Ingestion		No data available; calculated ATE2,000 - 5,000 mg/kg
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxy)]bisethyldiacetate	Dermal	Professional judgement	LD50 estimated to be 2,000 - 5,000 mg/kg
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxy)]bisethyldiacetate	Ingestion	Rat	LD50 > 2,000 mg/kg
Lauroyl Peroxide	Dermal		estimated to be > 5,000 mg/kg
Lauroyl Peroxide	Inhalation-Dust/Mist		estimated to be > 12.5 mg/l
Lauroyl Peroxide	Ingestion		estimated to be > 5,000 mg/kg
Synthetic amorphous silica, fumed, crystalline-free	Dermal	Rabbit	LD50 > 5,000 mg/kg
Synthetic amorphous silica, fumed, crystalline-free	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Synthetic amorphous silica, fumed, crystalline-free	Ingestion	Rat	LD50 > 5,110 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxy)]bisethyldiacetate	In vitro data	No significant irritation
Synthetic amorphous silica, fumed, crystalline-free	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxy)]bisethyldiacetate	In vitro data	No significant irritation
Synthetic amorphous silica, fumed, crystalline-free	Rabbit	No significant irritation

Skin Sensitisation

Name	Species	Value
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxy)]bisethyldiacetate	Mouse	Not classified
Lauroyl Peroxide	Guinea pig	Sensitising
Synthetic amorphous silica, fumed, crystalline-free	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
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxy)]bisethyldiacetate	In Vitro	Not mutagenic
Synthetic amorphous silica, fumed, crystalline-free	In Vitro	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Synthetic amorphous silica, fumed, crystalline-free	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
Synthetic amorphous silica, fumed,	Ingestion	Not classified for female reproduction	Rat	NOAEL 509	1 generation

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crystalline-free				mg/kg/day	
Synthetic amorphous silica, fumed, crystalline-free	Ingestion	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Synthetic amorphous silica, fumed, crystalline-free	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
Synthetic amorphous silica, fumed, crystalline-free	Inhalation	respiratory system silicosis	Not classified	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
Lauroyl Peroxide	105-74-8		Data not available or insufficient for classification			
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxy)] bisethyldiacetate	19224-29-4	Green algae	Experimental	72 hours	NOEC	>100 mg/l
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxy)] bisethyldiacetate	19224-29-4	Green algae	Experimental	72 hours	EC50	>100 mg/l
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5	Green Algae	Experimental	72 hours	EC50	>100 mg/l

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Synthetic amorphous silica, fumed, crystalline-free	112945-52-5	Green Algae	Experimental	72 hours	NOEC	60 mg/l
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5	Zebra Fish	Experimental	96 hours	LC50	>100 mg/l
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5	Water flea	Experimental	24 hours	EC50	>100 mg/l

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Lauroyl Peroxide	105-74-8	Experimental Biodegradation	28 days	BOD	88 % weight	OECD 301C - MITI test (I)
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxy)] bisethyldiacetate	19224-29-4	Experimental Biodegradation	28 days	CO2 evolution	8-13 % weight	OECD 301B - Modified sturm or CO2
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5	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
Lauroyl Peroxide	105-74-8	Estimated Bioconcentration		Bioaccumulation factor	7.4	Estimated: Bioconcentration factor
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxy)] bisethyldiacetate	19224-29-4	Estimated Bioconcentration		Log Kow	7.16	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

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.

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

Carcinogenicity

<u>Ingredient</u>	<u>CAS Nbr</u>	<u>Classification</u>	<u>Regulation</u>
Lauroyl Peroxide	105-74-8	Gr. 3: Not classifiable	International Agency for Research on Cancer

Global inventory status

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

15.2. Chemical Safety Assessment

Not applicable

SECTION 16: Other information

List of relevant H statements

H242	Heating may cause a fire.
H317	May cause an allergic skin reaction.

Revision information:

No revision information

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

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