



Safety Data Sheet

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Document group:	29-2964-4	Version number:	1.00
Revision date:	14/11/2016	Supersedes date:	Initial issue.
Transportation version number: 1.00 (14/11/2016)			

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

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

1.1. Product identifier

3M™ ESPE™ RelyX™ Unicem 2 Clicker™ Refill

Product Identification Numbers

70-2011-3721-6	70-2011-3722-4	70-2011-3723-2
7000055117	7000055118	7000055119

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:

29-2268-0, 29-2266-4

TRANSPORTATION INFORMATION

70-2011-3721-6, 70-2011-3722-4, 70-2011-3723-2

Not hazardous for transportation

KIT LABEL

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.

2.2. Label elements

CLP REGULATION (EC) No 1272/2008

Not applicable

Revision information:

No revision information



Safety Data Sheet

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Document group:	29-2266-4	Version number:	3.00
Revision date:	13/07/2017	Supersedes date:	12/07/2017
Transportation version number:	1.00 (14/11/2016)		

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

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

1.1. Product identifier

3M™ ESPE™ RelyX™ UNICEM 2 CLICKER™ Base Paste

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:

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

Hazardous to the Aquatic Environment (Chronic), Category 2 - Aquatic Chronic 2; H411

For full text of H phrases, see Section 16.

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

WARNING.

Symbols:

GHS07 (Exclamation mark) | GHS09 (Environment) |

Pictograms**Ingredients:**

Ingredient	CAS Nbr	EC No.	% by Wt
2,2'-ethylenedioxydiethyl dimethacrylate	109-16-0	203-652-6	10 - 20
Disodium peroxodisulphate	7775-27-1	231-892-1	< 3
Tert-butyl 3,5,5-trimethylperoxyhexanoate	13122-18-4	236-050-7	< 0.5

HAZARD STATEMENTS:

H317	May cause an allergic skin reaction.
H411	Toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS**Prevention:**

P280E	Wear protective gloves.
P273	Avoid release to the environment.

Response:

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

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

Test data used to override eye corrosion classification.
H334 was overridden due to physical form.

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	% by Wt	Classification
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			Registration No.		
Glass powder (65997-17-3), surface modified with 2-propenoic acid, 2-methyl-3-(trimethoxysilyl)propyl ester (2530-85-0) and phenyltrimethoxy silane (2996-92-1), bulk material	None			45 - 55	Substance not classified as hazardous
2-Propenoic acid, 2-methyl-, 1,1'-[1-(hydroxymethyl)-1,2-ethanediyl] ester, reaction products with 2-hydroxy-1,3-propanediyl dimethacrylate and phosphorus oxide	1224866-76-5			20 - 30	Eye Dam. 1, H318
2,2'-ethylenedioxydiethyl dimethacrylate	109-16-0	203-652-6		10 - 20	Skin Sens. 1, H317
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	68909-20-6	272-697-1		1 - 10	Substance with a Community level exposure limit in the workplace
OXIDE GLASS CHEMICALS (non-fibrous)	65997-17-3	266-046-0		< 3	Substance with a Community level exposure limit in the workplace
Disodium peroxodisulphate	7775-27-1	231-892-1		< 3	Ox. Sol. 3, H272; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Resp. Sens. 1, H334; Skin Sens. 1, H317; STOT SE 3, H335 Acute Tox. 4, H302
Tert-butyl 3,5,5-trimethylperoxyhexanoate	13122-18-4	236-050-7		< 0.5	Org. Perox. CD, H242; Aquatic Acute 1, H400,M=1; Aquatic Chronic 1, H410,M=1 Skin Sens. 1B, H317
Acetic acid, copper(2+) salt, monohydrate	6046-93-1			< 0.1	Aquatic Acute 1, H400,M=100; Aquatic Chronic 1, H410,M=100

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

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

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation

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

Skin contact

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

Eye contact

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

If swallowed

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

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

See Section 11.1 Information on toxicological effects

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

Not applicable

SECTION 5: Fire-fighting measures

5.1. Extinguishing media

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

5.2. Special hazards arising from the substance or mixture

None inherent in this product.

Hazardous Decomposition or By-Products

Substance

Carbon monoxide.

Carbon dioxide.

Irritant vapours or gases.

Condition

During combustion.

During combustion.

During combustion.

5.3. Advice for fire-fighters

No special protective actions for fire-fighters are anticipated.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapours, in accordance with good industrial hygiene practice. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

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

6.4. Reference to other sections

Refer to Section 8 and Section 13 for more information

SECTION 7: Handling and storage

7.1. Precautions for safe handling

A no-touch technique is recommended. If skin contact occurs, wash skin with soap and water. Acrylates may penetrate commonly-used gloves. If product contacts glove, remove and discard glove, wash hands immediately with soap and water and then re-glove. 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. Avoid release to the environment. Wash contaminated clothing before reuse. Do not get in eyes.

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
OXIDE GLASS CHEMICALS (non-fibrous)	65997-17-3	Manufacturer determined	TWA(as dust):10 mg/m ³	
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	tooth-coloured paste with slight acrylic odour
Odour threshold	<i>No data available.</i>
pH	<i>Not applicable.</i>
Boiling point/boiling range	<i>No data available.</i>
Melting point	<i>No data available.</i>
Flammability (solid, gas)	Not classified

Explosive properties	Not classified
Oxidising properties	Not classified
Flash point	No flash point
Autoignition temperature	<i>No data available.</i>
Flammable Limits(LEL)	<i>No data available.</i>
Flammable Limits(UEL)	<i>No data available.</i>
Vapour pressure	<i>No data available.</i>
Relative density	2 - 2.2 [Ref Std: WATER=1]
Water solubility	Negligible
Solubility- non-water	<i>No data available.</i>
Partition coefficient: n-octanol/water	<i>No data available.</i>
Evaporation rate	<i>No data available.</i>
Vapour density	<i>No data available.</i>
Decomposition temperature	<i>No data available.</i>
Viscosity	<i>No data available.</i>
Density	2 - 2.2 g/cm ³

9.2. Other information

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

None known.

Condition

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

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

11.1 Information on Toxicological effects

Signs and Symptoms of Exposure

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

Inhalation

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

Skin contact

Mild Skin Irritation: Signs/symptoms may include localised redness, swelling, itching, and dryness. 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	Ingestion		No data available; calculated ATE2,000 - 5,000 mg/kg
Glass powder (65997-17-3), surface modified with 2-propenoic acid, 2 methyl-3-(trimethoxysilyl)propyl ester (2530-85-0) and phenyltrimethoxy silane (2996-92-1), 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) and phenyltrimethoxy silane (2996-92-1), bulk material	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
2-Propenoic acid, 2-methyl-, 1,1'-[1-(hydroxymethyl)-1,2-ethanediyl] ester, reaction products with 2-hydroxy-1,3-propanediyl dimethacrylate and phosphorus oxide	Dermal		LD50 estimated to be > 5,000 mg/kg
2-Propenoic acid, 2-methyl-, 1,1'-[1-(hydroxymethyl)-1,2-ethanediyl] ester, reaction products with 2-hydroxy-1,3-propanediyl dimethacrylate and phosphorus oxide	Ingestion	Rat	LD50 > 2,000 mg/kg
2,2'-ethylenedioxydiethyl dimethacrylate	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
2,2'-ethylenedioxydiethyl dimethacrylate	Ingestion	Rat	LD50 10,837 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
OXIDE GLASS CHEMICALS (non-fibrous)	Dermal		LD50 estimated to be > 5,000 mg/kg
OXIDE GLASS CHEMICALS (non-fibrous)	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
Disodium peroxodisulphate	Dermal	Rabbit	LD50 > 10,000 mg/kg
Disodium peroxodisulphate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 47.93 mg/l
Disodium peroxodisulphate	Ingestion	Rat	LD50 895 mg/kg
Tert-butyl 3,5,5-trimethylperoxyhexanoate	Dermal	Rat	LD50 > 2,000 mg/kg
Tert-butyl 3,5,5-trimethylperoxyhexanoate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.8 mg/l

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Tert-butyl 3,5,5-trimethylperoxyhexanoate	Ingestion	Rat	LD50 12,905 mg/kg
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ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Glass powder (65997-17-3), surface modified with 2-propenoic acid, 2 methyl-.3-(trimethoxysilyl)propyl ester (2530-85-0) and phenyltrimethoxy silane (2996-92-1), bulk material	Professional judgement	No significant irritation
2-Propenoic acid, 2-methyl-, 1,1'-[1-(hydroxymethyl)-1,2-ethanediyl] ester, reaction products with 2-hydroxy-1,3-propanediyl dimethacrylate and phosphorus oxide	Rabbit	Minimal irritation
2,2'-ethylenedioxydiethyl dimethacrylate	Guinea pig	Mild irritant
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	Rabbit	No significant irritation
OXIDE GLASS CHEMICALS (non-fibrous)	Professional judgement	No significant irritation
Tert-butyl 3,5,5-trimethylperoxyhexanoate	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Overall product		No significant irritation
Glass powder (65997-17-3), surface modified with 2-propenoic acid, 2 methyl-.3-(trimethoxysilyl)propyl ester (2530-85-0) and phenyltrimethoxy silane (2996-92-1), bulk material	Professional judgement	No significant irritation
2-Propenoic acid, 2-methyl-, 1,1'-[1-(hydroxymethyl)-1,2-ethanediyl] ester, reaction products with 2-hydroxy-1,3-propanediyl dimethacrylate and phosphorus oxide	Rabbit	Corrosive
2,2'-ethylenedioxydiethyl dimethacrylate	Professional judgement	Moderate irritant
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	Rabbit	No significant irritation
OXIDE GLASS CHEMICALS (non-fibrous)	Professional judgement	No significant irritation
Tert-butyl 3,5,5-trimethylperoxyhexanoate	Rabbit	No significant irritation

Skin Sensitisation

Name	Species	Value
2-Propenoic acid, 2-methyl-, 1,1'-[1-(hydroxymethyl)-1,2-ethanediyl] ester, reaction products with 2-hydroxy-1,3-propanediyl dimethacrylate and phosphorus oxide	Guinea pig	Not classified
2,2'-ethylenedioxydiethyl dimethacrylate	Human and animal	Sensitising
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	Human and animal	Not classified
Tert-butyl 3,5,5-trimethylperoxyhexanoate	Guinea pig	Sensitising

Respiratory Sensitisation

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

Germ Cell Mutagenicity

Name	Route	Value
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2-Propenoic acid, 2-methyl-, 1,1'-[1-(hydroxymethyl)-1,2-ethanediyl] ester, reaction products with 2-hydroxy-1,3-propanediyl dimethacrylate and phosphorus oxide	In Vitro	Not mutagenic
2,2'-ethylenedioxydiethyl dimethacrylate	In Vitro	Some positive data exist, but the data are not sufficient for classification
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	In Vitro	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
2,2'-ethylenedioxydiethyl dimethacrylate	Dermal	Mouse	Not carcinogenic
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
2,2'-ethylenedioxydiethyl dimethacrylate	Ingestion	Not classified for female reproduction	Mouse	NOAEL 1 mg/kg/day	1 generation
2,2'-ethylenedioxydiethyl dimethacrylate	Ingestion	Not classified for male reproduction	Mouse	NOAEL 1 mg/kg/day	1 generation
2,2'-ethylenedioxydiethyl dimethacrylate	Ingestion	Not classified for development	Mouse	NOAEL 1 mg/kg/day	1 generation
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
2,2'-ethylenedioxydiethyl dimethacrylate	Dermal	kidney and/or bladder blood	Not classified	Mouse	NOAEL 833 mg/kg/day	78 weeks
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
Acetic acid, copper(2+) salt, monohydrate	6046-93-1	Common Carp	Experimental	96 days	LC50	0.004 mg/l
Acetic acid, copper(2+) salt, monohydrate	6046-93-1	Crustacea	Experimental	96 hours	EC50	>12.8 mg/l
Acetic acid, copper(2+) salt, monohydrate	6046-93-1	Algae other	Experimental	72 hours	EC50	0.005 mg/l
OXIDE GLASS CHEMICALS (non-fibrous)	65997-17-3		Data not available or insufficient for classification			
Tert-butyl 3,5,5-trimethylperoxyhexanoate	13122-18-4		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) and phenyltrimethoxy silane (2996-92-1), bulk material	None		Data not available or insufficient for classification			
2-Propenoic acid, 2-methyl-, 1,1'-[1-(hydroxymethyl)-1,2-ethanediyl] ester, reaction products with 2-hydroxy-1,3-propanediyl dimethacrylate and phosphorus oxide	1224866-76-5	Water flea	Experimental	48 hours	EC50	>100 mg/l
2-Propenoic acid, 2-methyl-,	1224866-76-5	Green algae	Experimental	72 hours	NOEC	56 mg/l

1,1'-[1-(hydroxymethyl)-1,2-ethanediyl] ester, reaction products with 2-hydroxy-1,3-propanediyl dimethacrylate and phosphorus oxide						
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	68909-20-6	Algae	Estimated	72 hours	EC50	>100 mg/l
2,2'-ethylenedioxydiethyl dimethacrylate	109-16-0		Data not available or insufficient for classification			
Disodium peroxodisulphate	7775-27-1	Rainbow trout	Experimental	96 hours	LC50	163 mg/l
Disodium peroxodisulphate	7775-27-1	Water flea	Experimental	48 hours	EC50	64.6 mg/l
Disodium peroxodisulphate	7775-27-1	Green Algae	Experimental	72 hours	EC50	116 mg/l
Disodium peroxodisulphate	7775-27-1	Water flea	Experimental	21 days	NOEC	10 mg/l
Disodium peroxodisulphate	7775-27-1	Green Algae	Experimental	72 hours	NOEC	3.2 mg/l

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
2,2'-ethylenedioxydiethyl dimethacrylate	109-16-0	Estimated Biodegradation	28 days	BOD	60 % weight	Other methods
2-Propenoic acid, 2-methyl-, 1,1'-[1-(hydroxymethyl)-1,2-ethanediyl] ester, reaction products with 2-hydroxy-1,3-propanediyl	1224866-76-5	Experimental Biodegradation	28 days	BOD	82 % weight	OECD 301F - Manometric respirometry

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dimethacrylate and phosphorus oxide						
Tert-butyl 3,5,5-trimethylperoxyhexanoate	13122-18-4	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Acetic acid, copper(2+) salt, monohydrate	6046-93-1	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
OXIDE GLASS CHEMICALS (non-fibrous)	65997-17-3	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
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
Disodium peroxodisulphate	7775-27-1	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) and phenyltrimethoxy silane (2996-92-1), bulk material	None	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
2,2'-ethylenedioxydiethyl dimethacrylate	109-16-0	Experimental Bioaccumulation		Log Kow	1.88	Other methods
2-Propenoic acid, 2-methyl-, 1,1'-[1-(hydroxymethyl)-1,2-ethanediyl]	1224866-76-5	Experimental Bioconcentration		Log Kow	-0.2	Other methods

ester, reaction products with 2-hydroxy-1,3-propanediyl dimethacrylate and phosphorus oxide						
Tert-butyl 3,5,5-trimethylperoxyhexanoate	13122-18-4	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Acetic acid, copper(2+) salt, monohydrate	6046-93-1	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
OXIDE GLASS CHEMICALS (non-fibrous)	65997-17-3	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
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
Disodium peroxodisulphate	7775-27-1	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) and phenyltrimethoxy silane (2996-92-1), 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

Incinerate in a permitted waste incineration facility.

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

EU waste code (product as sold)

180106* Chemicals consisting of or containing dangerous substances.

SECTION 14: Transportation information

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. One or more of the components of this product have been notified to ELINCS (European List of Notified or New Chemical Substances). Certain restrictions apply. Contact the selling division for additional information.

15.2. Chemical Safety Assessment

A chemical safety assessment has been carried out for the relevant substances in this material by the registrant in accordance with regulation REGULATION (EC) No 1907/2006

SECTION 16: Other information

List of relevant H statements

H242	Heating may cause a fire.
H272	May intensify fire; oxidiser.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.

Revision information:

CLP: Ingredient table information was modified.

Section 11: Reproductive Toxicity Table information was modified.

Section 11: Skin Sensitization Table information was modified.

Section 11: Target Organs - Repeated Table information was modified.
Section 12: Persistence and Degradability information information was modified.
Section 12:Biocumulative potential information information was modified.
Section 15: Chemical Safety Assessment information was modified.
Section 15: Label remarks and EU Detergent information was modified.
Section 3: Composition/ Information of ingredients table information was added.
Section 3: Composition/ Information of ingredients table information was deleted.
Section 9: Property description for optional properties information was modified.

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:	29-2268-0	Version number:	2.00
Revision date:	14/11/2016	Supersedes date:	19/08/2013
Transportation version number:	1.00 (19/08/2013)		

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

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

Identified uses

Dental Product

Restrictions on Use

For use only by dental professionals

1.3. Details of the supplier of the safety data sheet

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

1.4. Emergency telephone number

+44 (0)1344 858 000

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

CLP REGULATION (EC) No 1272/2008

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

CLASSIFICATION:

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

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

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

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For full text of H phrases, see Section 16.

2.2. Label elements

CLP REGULATION (EC) No 1272/2008

SIGNAL WORD

WARNING.

Symbols:

GHS07 (Exclamation mark) |

Pictograms



Ingredients:

Ingredient	CAS Nbr	% by Wt
1,12-Dodecanediyl bismethacrylate	72829-09-5	< 5
[(3-methoxypropyl)imino]di-2,1-ethanediyl bismethacrylate	93962-71-1	< 2
2-[(2-hydroxyethyl)(3-methoxypropyl)amino]ethyl methacrylate	93962-70-0	< 0.5

HAZARD STATEMENTS:

H319	Causes serious eye irritation.
H317	May cause an allergic skin reaction.
H413	May cause long lasting harmful effects to aquatic life.

PRECAUTIONARY STATEMENTS

Prevention:

P280E Wear protective gloves.

Response:

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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

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	EU Inventory	% by Wt	Classification
Glass powder (65997-17-3), surface modified with 2-propenoic acid, 2 methyl-3-(trimethoxysilyl)propyl ester	None		50 - 70	Substance not classified as hazardous

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(2530-85-0), bulk material				
(1-Methylethylidene)bis(4,1-phenyleneoxy-3,1-propanediyl) bismethacrylate (REACH Reg. No.:01-2120102014-82)	27689-12-9	248-607-1	10 - 30	Aquatic Chronic 4, H413 (Self Classified)
Sodium toluene-4-sulphinate	824-79-3	212-538-5	< 5	Substance not classified as hazardous
1,12-Dodecanediyl bismethacrylate	72829-09-5	276-900-4	< 5	Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335 (Vendor)
2,4,6(1H,3H,5H)-Pyrimidinetrione, 5-phenyl-1-(phenylmethyl)-, calcium salt (2:1)	945012-02-2		< 5	Substance not classified as hazardous
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	68909-20-6	272-697-1	< 5	Substance with a Community level exposure limit in the workplace
[(3-methoxypropyl)imino]di-2,1-ethanediyl bismethacrylate	93962-71-1	300-709-8	< 2	Skin Sens. 1, H317 (Self Classified)
Calcium Hydroxide	1305-62-0	215-137-3	< 2	Skin Corr. 1C, H314 (Self Classified)
2-[(2-hydroxyethyl)(3-methoxypropyl)amino]ethyl methacrylate	93962-70-0	300-708-2	< 0.5	Skin Sens. 1, H317 (Self Classified)
Titanium dioxide	13463-67-7	236-675-5	< 0.5	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

Immediately flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. Get medical attention.

If swallowed

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

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

See Section 11.1 Information on toxicological effects

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

Not applicable

SECTION 5: Fire-fighting measures

5.1. Extinguishing media

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

5.2. Special hazards arising from the substance or mixture

None inherent in this product.

Hazardous Decomposition or By-Products**Substance**

Carbon monoxide.
Carbon dioxide.
Irritant vapours or gases.

Condition

During combustion.
During combustion.
During combustion.

5.3. Advice for fire-fighters

No special protective actions for fire-fighters are anticipated.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapours, in accordance with good industrial hygiene practice. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

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

6.4. Reference to other sections

Refer to Section 8 and Section 13 for more information

SECTION 7: Handling and storage**7.1. Precautions for safe handling**

A no-touch technique is recommended. If skin contact occurs, wash skin with soap and water. Acrylates may penetrate commonly-used gloves. If product contacts glove, remove and discard glove, wash hands immediately with soap and water and then re-glove. 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**

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

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for the component.

Ingredient	CAS Nbr	Agency	Limit type	Additional comments
Calcium Hydroxide	1305-62-0	UK HSC	TWA:5 mg/m ³	
Titanium dioxide	13463-67-7	UK HSC	TWA(Inhalable):10 mg/m ³ ;TWA(respirable):4 mg/m ³	
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	tooth-coloured pastes with slight acrylic odour
Odour threshold	<i>No data available.</i>
pH	<i>Not applicable.</i>
Boiling point/boiling range	<i>No data available.</i>
Melting point	<i>No data available.</i>
Flammability (solid, gas)	Not classified
Explosive properties	Not classified
Oxidising properties	Not classified
Flash point	No flash point
Autoignition temperature	<i>No data available.</i>
Flammable Limits(LEL)	<i>No data available.</i>
Flammable Limits(UEL)	<i>No data available.</i>
Vapour pressure	<i>No data available.</i>
Relative density	2 - 2.2 [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>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	2 - 2.2 g/cm ³

9.2. Other information

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

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

This material 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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Mild Skin Irritation: Signs/symptoms may include localised redness, swelling, itching, and dryness. Allergic skin reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

Eye contact

Severe eye irritation: Signs/symptoms may include significant redness, swelling, pain, tearing, cloudy appearance of the cornea, and impaired vision.

Ingestion

May be harmful if swallowed.

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

Additional Health Effects:**Carcinogenicity:**

Exposures needed to cause the following health effect(s) are not expected during normal, intended use:

Contains a chemical or chemicals which can cause cancer.

Toxicological Data

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

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE >5,000 mg/kg
Overall product	Ingestion		No data available; calculated ATE 2,000 - 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	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
(1-Methylethylidene)bis(4,1-phenyleneoxy-3,1-propanediyl) bismethacrylate	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
(1-Methylethylidene)bis(4,1-phenyleneoxy-3,1-propanediyl) bismethacrylate	Ingestion	Rat	LD50 > 17,600 mg/kg
1,12-Dodecanediyl bismethacrylate	Dermal	Professional judgement	LD50 estimated to be 2,000 - 5,000 mg/kg
1,12-Dodecanediyl bismethacrylate	Ingestion	similar compounds	LD50 2000-5000 mg/kg
2,4,6(1H,3H,5H)-Pyrimidinetrione, 5-phenyl-1-(phenylmethyl)-, calcium salt (2:1)	Dermal	Professional judgement	LD50 estimated to be 2,000 - 5,000 mg/kg
2,4,6(1H,3H,5H)-Pyrimidinetrione, 5-phenyl-1-(phenylmethyl)-, calcium salt (2:1)	Ingestion	Rat	LD50 > 2,000 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
Sodium toluene-4-sulphinate	Dermal	Professional judgement	LD50 estimated to be 2,000 - 5,000 mg/kg
Sodium toluene-4-sulphinate	Ingestion	Rat	LD50 3,200 mg/kg

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Calcium Hydroxide	Dermal	Rabbit	LD50 > 2,500 mg/kg
Calcium Hydroxide	Ingestion	Rat	LD50 7,340 mg/kg
[(3-methoxypropyl)imino]di-2,1-ethanediyl bismethacrylate	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
[(3-methoxypropyl)imino]di-2,1-ethanediyl bismethacrylate	Ingestion	Rat	LD50 > 1,600 mg/kg
Titanium dioxide	Dermal	Rabbit	LD50 > 10,000 mg/kg
Titanium dioxide	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 6.82 mg/l
Titanium dioxide	Ingestion	Rat	LD50 > 10,000 mg/kg
2-[(2-hydroxyethyl)(3-methoxypropyl)amino]ethyl methacrylate	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
2-[(2-hydroxyethyl)(3-methoxypropyl)amino]ethyl methacrylate	Ingestion	Rat	LD50 > 400 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/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
(1-Methylethylidene)bis(4,1-phenyleneoxy-3,1-propanediyl) bismethacrylate	Rabbit	No significant irritation
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	Rabbit	No significant irritation
Calcium Hydroxide	Human	Corrosive
Titanium dioxide	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
(1-Methylethylidene)bis(4,1-phenyleneoxy-3,1-propanediyl) bismethacrylate	Rabbit	Mild irritant
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	Rabbit	No significant irritation
Calcium Hydroxide	Rabbit	Corrosive
Titanium dioxide	Rabbit	No significant irritation

Skin Sensitisation

Name	Species	Value
(1-Methylethylidene)bis(4,1-phenyleneoxy-3,1-propanediyl) bismethacrylate	Guinea pig	Not sensitising
2,4,6(1H,3H,5H)-Pyrimidinetrione, 5-phenyl-1-(phenylmethyl)-, calcium salt (2:1)	Mouse	Not sensitising
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	Human and animal	Not sensitising
[(3-methoxypropyl)imino]di-2,1-ethanediyl bismethacrylate	Professional judgement	Sensitising
Titanium dioxide	Human and animal	Not sensitising
2-[(2-hydroxyethyl)(3-methoxypropyl)amino]ethyl methacrylate	Professional judgement	Sensitising

3M™ ESPE™ RelyX™ UNICEM 2 CLICKER™ CATALYST**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
(1-Methylethylidene)bis(4,1-phenyleneoxy-3,1-propanediyl) bismethacrylate	In Vitro	Not mutagenic
2,4,6(1H,3H,5H)-Pyrimidinetrione, 5-phenyl-1-(phenylmethyl)-, calcium salt (2:1)	In Vitro	Not mutagenic
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	In Vitro	Not mutagenic
Titanium dioxide	In Vitro	Not mutagenic
Titanium dioxide	In vivo	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
Titanium dioxide	Ingestion	Multiple animal species	Not carcinogenic
Titanium dioxide	Inhalation	Rat	Carcinogenic.

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 toxic to female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	Ingestion	Not toxic to male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	Ingestion	Not toxic to development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis

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

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
2,4,6(1H,3H,5H)-Pyrimidinetrione, 5-phenyl-1-(phenylmethyl)-, calcium salt (2:1)	Ingestion	nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 2,000 mg/kg	
Calcium Hydroxide	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	LOAEL 2.5 mg/m3	20 minutes

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	All data are negative	Human	NOAEL Not available	occupational exposure
Titanium dioxide	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 0.01 mg/l	2 years
Titanium dioxide	Inhalation	pulmonary fibrosis	All data are negative	Human	NOAEL Not available	occupational exposure

Aspiration Hazard

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

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

SECTION 12: Ecological information

The information below may not agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 12 are based on UN GHS calculation rules and classifications derived from 3M assessments.

12.1. Toxicity

No product test data available.

Material	CAS Nbr	Organism	Type	Exposure	Test endpoint	Test result
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			
Sodium toluene-4-sulphinate	824-79-3	Green Algae	Estimated	96 hours	EC50	230 mg/l
Sodium toluene-4-sulphinate	824-79-3	Water flea	Estimated	48 hours	EC50	>400 mg/l
Sodium toluene-4-sulphinate	824-79-3	Green Algae	Estimated	96 hours	NOEC	31 mg/l
Sodium toluene-4-sulphinate	824-79-3	Fathead minnow	Estimated	96 hours	LC50	>400 mg/l
2-[(2-hydroxyethyl)(3-methoxypropyl)amino]ethyl methacrylate	93962-70-0		Data not available or insufficient for classification			
[(3-methoxypropyl)imino]di-2,1-ethanediyl bismethacrylate	93962-71-1		Data not available or insufficient for classification			
(1-Methylethylide	27689-12-9		Data not available or			

ne)bis(4,1-phenyleneoxy-3,1-propanediyl) bismethacrylate			insufficient for classification			
Titanium dioxide	13463-67-7	Water flea	Experimental	48 hours	EC50	>100 mg/l
Titanium dioxide	13463-67-7	Sheepshead Minnow	Experimental	96 hours	LC50	>240 mg/l
Titanium dioxide	13463-67-7	Fish	Experimental	30 days	NOEC	>100 mg/l
Titanium dioxide	13463-67-7	Water flea	Experimental	30 days	NOEC	3 mg/l
1,12-Dodecanediyl bismethacrylate	72829-09-5		Data not available or insufficient for classification			
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	68909-20-6	Algae	Estimated	72 hours	EC50	>100 mg/l
2,4,6(1H,3H,5H)-Pyrimidinetrione, 5-phenyl-1-(phenylmethyl)-, calcium salt (2:1)	945012-02-2		Data not available or insufficient for classification			
Calcium Hydroxide	1305-62-0	Green Algae	Estimated	72 hours	EC50	>4,000 mg/l
Calcium Hydroxide	1305-62-0	Fathead minnow	Estimated	96 hours	LC50	2,110 mg/l
Calcium Hydroxide	1305-62-0	Water flea	Estimated	48 hours	EC50	1,062 mg/l

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Calcium Hydroxide	1305-62-0	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Titanium dioxide	13463-67-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
(1-Methylethylidene)bis(4,1-phenyleneoxy-3,1-propanediyl)	27689-12-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

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bismethacrylate						
(1-Methylethylidene)bis(4,1-phenyleneoxy-3,1-propanediyl) bismethacrylate	27689-12-9	Estimated Biodegradation	28 days	BOD	39 % 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
1,12-Dodecanediyl bismethacrylate	72829-09-5	Estimated Biodegradation	28 days	BOD	90 % weight	OECD 301C - MITI test (I)
Sodium toluene-4-sulphinate	824-79-3	Estimated Photolysis		Photolytic half-life (in air)	26 days (t 1/2)	Other methods
Sodium toluene-4-sulphinate	824-79-3	Experimental Biodegradation	28 days	BOD	69 % weight	OECD 301C - MITI test (I)
2-[(2-hydroxyethyl)(3-methoxypropyl)amino]ethyl methacrylate	93962-70-0	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
[(3-methoxypropyl)imino]di-2,1-ethanediyl bismethacrylate	93962-71-1	Estimated Biodegradation	28 days	BOD	55 % weight	OECD 301C - MITI test (I)
2,4,6(1H,3H,5H)-Pyrimidinetrione, 5-phenyl-1-(phenylmethyl)-, calcium salt (2:1)	945012-02-2	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

12.3 : Bioaccumulative potential

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Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Calcium Hydroxide	1305-62-0	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Titanium dioxide	13463-67-7	Experimental BCF-Carp	42 days	Bioaccumulation factor	9.6	Other methods
(1-Methylethylidene)bis(4,1-phenyleneoxy-3,1-propanediyl) bismethacrylate	27689-12-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
(1-Methylethylidene)bis(4,1-phenyleneoxy-3,1-propanediyl) bismethacrylate	27689-12-9	Estimated Bioconcentration		Bioaccumulation factor	7.6	Other methods
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
1,12-Dodecanediyl bismethacrylate	72829-09-5	Estimated Bioconcentration		Bioaccumulation factor	1230	Other methods
1,12-Dodecanediyl bismethacrylate	72829-09-5	Estimated Bioconcentration		Bioaccumulation factor	6.6	Estimated: Bioconcentration factor
Sodium toluene-4-sulphinate	824-79-3	Estimated BCF-Carp	42 days	Bioaccumulation factor	<2.3	OECD 305E - Bioaccumulation flow-through fish test
Sodium toluene-4-sulphinate	824-79-3	Estimated Bioconcentration	42 days	Bioaccumulation factor	3.9	Estimated: Bioconcentration factor
2-[(2-hydroxyethyl)(3-methoxypropyl)amino]ethyl methacrylate	93962-70-0	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
[(3-methoxypropyl)imino]di-2,1-ethanediyl bismethacrylate	93962-71-1	Estimated Bioconcentration		Bioaccumulation factor	3.4	Estimated: Bioconcentration factor
2,4,6(1H,3H,5H)-Pyrimidinetrion	945012-02-2	Data not available or insufficient for	N/A	N/A	N/A	N/A

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e, 5-phenyl-1-(phenylmethyl)-, calcium salt (2:1)		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	N/A	N/A	N/A	N/A

12.4. Mobility in soil

Please contact manufacturer for more details

12.5. Results of the PBT and vPvB assessment

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

12.6. Other adverse effects

No information available.

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

See Section 11.1 Information on toxicological effects

Dispose of waste product in a permitted industrial waste facility.

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/IMDG/IATA: Not restricted for transport.

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

Titanium dioxide

CAS Nbr

13463-67-7

Classification

Grp. 2B: Possible human carc.

Regulation

International Agency for Research on Cancer

Global inventory status

Contact 3M for more information.

15.2. Chemical Safety Assessment

Not applicable

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

H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H413	May cause long lasting harmful effects to aquatic life.

Revision information:

Company Telephone information was added.
Section 1: Restrictions on use information information was added.
CLP: Ingredient table information was added.
Section 2: H phrase reference information was added.
Section 2: Indication of danger information information was deleted.
Label: CLP Classification information was added.
Label: CLP Classification information was modified.
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: Graphic Text information was deleted.
Label: Graphic information was added.
Label: Graphic information was deleted.
Label: Signal Word information was added.
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 information was deleted.
Safety phrase information was deleted.
Section 3: Composition/ Information of ingredients table information was modified.
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 eye 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 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 added.
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: Property description for optional properties information was added.
Section 9: Property description for optional properties information was deleted.
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: Cancer Hazards information information was modified.
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 - Eye information information was modified.
Section 11: Health Effects - Ingestion information information was modified.
Section 11: Health Effects - Inhalation 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: Skin Corrosion/Irritation Table information was modified.
Section 11: Skin Sensitization Table information was modified.
Section 11: Target Organs - Repeated Table information was modified.
Section 11: Target Organs - Single Table information was modified.
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: Standard Phrase Category Waste GHS information was modified.
Section 14: Transportation classification information was added.
Section 16: List of relevant R phrase 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 modified.

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