



Safety Data Sheet

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Document group:	30-7032-3	Version number:	2.00
Revision date:	10/01/2013	Supersedes date:	08/01/2013
Transportation version number: 1.00 (08/01/2013)			

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™ ESPET™ KETAC FIL PLUS APLICAP LIQUID

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

Identified uses

Dental Product

1.3. Details of the supplier of the substance or mixture

Address: 3M United Kingdom PLC, 3M Centre, Cain Road, Bracknell, Berkshire, RG12 8HT.

E Mail: tox.uk@mmm.com

Website: www.3M.com/uk

1.4. Emergency telephone number

+44 (0)1344 858 000

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

CLP REGULATION (EC) No 1272/2008

CLASSIFICATION:

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

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

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

2.2. Label elements

CLP REGULATION (EC) No 1272/2008

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

3M™ ESPET™ KETAC FIL PLUS APLICAP LIQUID

Symbol(s)

None.

Contains:

No ingredients are assigned to the label.

Risk phrases None.

Safety phrases None.

Special provisions concerning the labelling of certain substances

Safety data sheet available for professional user on request.

Notes on labelling

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

Bovine Corneal Opacity Permeability Assay (BCOP) test data indicate material does not meet R36 classification criteria.

2.3. Other hazards

None known.

SECTION 3: Composition/information on ingredients

Ingredient	CAS Nbr	EU Inventory	% by Wt	Classification
Non hazardous ingredient	Mixture		40 - 55	
Acrylic acid maleic acid copolymer	29132-58-9		35 - 55	Xi:R36 (Self Classified) Eye Irrit. 2, H319 (Self Classified)
Tartaric Acid	87-69-4	EINECS 201-766-0	5 - 10	Xi:R36 (Vendor) Eye Irrit. 2, H319 (Vendor)

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

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

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

SECTION 4: First aid measures

4.1. Description of first aid measures**Eye contact**

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

Skin contact

Wash with soap and water. If signs/symptoms develop, get medical attention.

Inhalation

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

3M™ ESPET™ KETAC FIL PLUS APLICAP LIQUID

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.

5.2. Special hazards arising from the substance or mixture

None inherent in this product.

Hazardous Decomposition or By-Products

Substance

Irritant vapours or gases.

Condition

During combustion.

5.3. Advice for fire-fighters

No unusual fire or explosion hazards are anticipated.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

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

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

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

6.4. Reference to other sections

Refer to Section 8 and Section 13 for more information

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Do not use in a confined area or areas with little or no air movement. Avoid breathing dust/fume/gas/mist/vapours/spray. 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

3M™ ESPE™ KETAC FIL PLUS APLICAP LIQUID

8.1 Control parameters

Occupational exposure limits

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

8.2. Exposure controls

8.2.1. Engineering controls

Use with appropriate local exhaust ventilation.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

As a good industrial hygiene practice:

Wear eye/face protection.

The following eye protection(s) are recommended: Safety glasses with side shields.

Skin/hand protection

Skin protection is not required.

Respiratory protection

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

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid.
Specific Physical Form:	Liquid.
Appearance/Odour	Slightly acidic odour, colourless
pH	No data available.
Boiling point/boiling range	100 °C
Melting point	Not applicable.
Flammability (solid, gas)	Not applicable.
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	No data available.
Relative density	>=1 [Ref Std: WATER=1]
Water solubility	Complete
Partition coefficient: n-octanol/water	No data available.
Evaporation rate	No data available.
Vapour density	No data available.
Viscosity	<=10 Pa-s
Density	No data available.

9.2. Other information

Volatile organic compounds (VOC)
Percent volatile
VOC less H₂O & exempt solvents

No data available.
No data available.
No data available.

SECTION 10: Stability and reactivity

10.1 Reactivity

This material is considered to be non reactive under normal use conditions

10.2 Chemical stability

Stable.

10.3 Possibility of hazardous reactions

Hazardous polymerisation will not occur.

10.4 Conditions to avoid

None known.

10.5 Incompatible materials

None known.

10.6 Hazardous decomposition products

Substance

Condition

None known.

SECTION 11: Toxicological information

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

11.1 Information on Toxicological effects

Signs and Symptoms of Exposure

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

Eye contact

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

Skin contact

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

Inhalation

Respiratory tract irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Ingestion

3M™ ESPE™ KETAC FIL PLUS APLICAP LIQUID

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

Toxicological Data**Acute Toxicity**

Name	Route	Species	Value
Overall product	Ingestion		No test data available; calculated ATE >5,000 mg/kg
Acrylic acid maleic acid copolymer			No data available
Tartaric Acid			No data available

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Acrylic acid maleic acid copolymer		No data available
Tartaric Acid		No data available

Serious Eye Damage/Irritation

Name	Species	Value
Acrylic acid maleic acid copolymer		No data available
Tartaric Acid		No data available

Skin Sensitisation

Name	Species	Value
Acrylic acid maleic acid copolymer		No data available
Tartaric Acid		No data available

Respiratory Sensitisation

Name	Species	Value
Acrylic acid maleic acid copolymer		No data available
Tartaric Acid		No data available

Germ Cell Mutagenicity

Name	Route	Value
Acrylic acid maleic acid copolymer		No data available
Tartaric Acid		No data available

Carcinogenicity

Name	Route	Species	Value
Acrylic acid maleic acid copolymer			No data available
Tartaric Acid			No data available

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

Name	Route	Value	Species	Test result	Exposure Duration
Acrylic acid maleic acid copolymer		No data available			
Tartaric Acid		No data available			

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

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Acrylic acid maleic acid copolymer			No data available			

3M™ ESPET™ KETAC FIL PLUS APLICAP LIQUID

Tartaric Acid			No data available			
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Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Acrylic acid maleic acid copolymer			No data available			
Tartaric Acid			No data available			

Aspiration Hazard

Name	Value
Acrylic acid maleic acid copolymer	Not an aspiration hazard
Tartaric Acid	Not an aspiration hazard

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

SECTION 12: Ecological information

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

12.1. Toxicity**Acute aquatic hazard:**

Not acutely toxic to aquatic life by GHS criteria.

Chronic aquatic hazard:

Not chronically toxic to aquatic life by GHS criteria.

No product test data available.

Material	CAS Nbr	Organism	Type	Exposure	Test endpoint	Test result
Acrylic acid maleic acid copolymer	29132-58-9		No data available.			
Tartaric Acid	87-69-4		No data available.			

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Tartaric Acid	87-69-4	Analogous Compound Biodegradation	14 days	BOD	76 % weight	Other methods
Acrylic acid maleic acid copolymer	29132-58-9	No data available.	N/A	N/A	N/A	N/A

12.3 : Bioaccumulative potential

3M™ ESPET™ KETAC FIL PLUS APLICAP LIQUID

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Tartaric Acid	87-69-4	Estimated Bioconcentration		Log Kow	-1.00	Estimated: Octanol-water partition coefficient
Acrylic acid maleic acid copolymer	29132-58-9	No data available.	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**

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

This product has been classified as a non-hazardous waste. Prior to disposal, consult all applicable authorities and regulations to insure proper classification. Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. Empty and clean product containers may be disposed as non-hazardous waste. Consult your specific regulations and service providers to determine available options and requirements.

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.
- 180107 Chemicals other than those mentioned in 18 01 06

SECTION 14: Transportation information**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.

15.2. Chemical Safety Assessment

Not applicable

SECTION 16: Other information

List of relevant H statements

H319 Causes serious eye irritation.

List of relevant R-phrases

R36 Irritating to eyes.

Revision information:

Revision Changes:

Section 1: Initial issue message 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:	16-2693-6	Version number:	7.00
Revision date:	10/01/2013	Supersedes date:	28/03/2008
Transportation version number:	1.00 (10/01/2013)		

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™ KETAC-FIL PLUS APLICAP POWDER

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

Identified uses

Dental Product

1.3. Details of the supplier of the substance or mixture

Address: 3M United Kingdom PLC, 3M Centre, Cain Road, Bracknell, Berkshire, RG12 8HT.

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

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

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

2.2. Label elements

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

Symbol(s)

None.

Contains:

3M™ ESPE™ KETAC-FIL PLUS APLICAP POWDER

No ingredients are assigned to the label.

Risk phrases None.

Safety phrases None.

Notes on labelling

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

2.3. Other hazards

None known.

SECTION 3: Composition/information on ingredients

Ingredient	CAS Nbr	EU Inventory	% by Wt	Classification
GLASS POWDER	65997-17-3	EINECS 266-046-0	± 100	

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

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

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

SECTION 4: First aid measures

4.1. Description of first aid measures

Eye contact

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

Skin contact

Wash with soap and water. If signs/symptoms develop, get medical attention.

Inhalation

Remove person to fresh air. If you feel unwell, 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

Material will not burn.

5.2. Special hazards arising from the substance or mixture

None inherent in this product.

3M™ ESPE™ KETAC-FIL PLUS APLICAP POWDER

Hazardous Decomposition or By-Products

Substance

None known.

Condition

During combustion.

5.3. Advice for fire-fighters

No unusual fire or explosion hazards are anticipated.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Observe precautions from other sections.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Collect as much of the spilled material as possible. Use wet sweeping compound or water to avoid dusting. Sweep up. Clean up residue.

6.4. Reference to other sections

Refer to Section 8 and Section 13 for more information

SECTION 7: Handling and storage

7.1. Precautions for safe handling

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

Occupational exposure limits

Ingredient	CAS Nbr	Agency	Limit type	Additional comments
Glass filaments	65997-17-3	Health and Safety Comm. (UK)	TWA(as fiber):5 mg/m ³ (1 fibers/ml)	
GLASS POWDER	65997-17-3	Manufacturer determined	TWA(as dust):10 mg/m ³	

Health and Safety Comm. (UK) : UK Health and Safety Commission

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

ppm: parts per million

mg/m³: milligrams per cubic metre

CEIL: Ceiling

8.2. Exposure controls

8.2.1. Engineering controls

Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapours/spray. If ventilation is not adequate, use respiratory protection equipment.

8.2.2. Personal protective equipment (PPE)**Eye/face protection**

The following eye protection(s) are recommended: Safety glasses with side shields.

Skin/hand protection

Skin protection is not required.

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:	Powder
Appearance/Odour	Different coloured, odourless powders
pH	<i>Not applicable.</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	No flash point
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	≥ 1.0 [Ref Std: WATER=1]
Water solubility	Moderate
Partition coefficient: n-octanol/water	<i>No data available.</i>
Evaporation rate	<i>Not applicable.</i>
Vapour density	<i>Not applicable.</i>
Viscosity	<i>Not applicable.</i>

9.2. Other information

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

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

3M™ ESPE™ KETAC-FIL PLUS APLICAP POWDER

This material is considered to be non reactive under normal use conditions

10.2 Chemical stability

Stable.

10.3 Possibility of hazardous reactions

Hazardous polymerisation will not occur.

10.4 Conditions to avoid

None known.

10.5 Incompatible materials

None known.

10.6 Hazardous decomposition products

Substance

Condition

None known.

SECTION 11: Toxicological information

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

11.1 Information on Toxicological effects

Signs and Symptoms of Exposure

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

Eye contact

Mechanical eye irritation: Signs/symptoms may include pain, redness, tearing and corneal abrasion.

Skin contact

Mechanical skin irritation: Signs/symptoms may include abrasion, redness, pain, and itching.

Inhalation

Respiratory tract irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Ingestion

May be harmful if swallowed.

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

Toxicological Data

Acute Toxicity

Name	Route	Species	Value
Overall product	Ingestion		No test data available; calculated ATE2,500 mg/kg
GLASS POWDER	Dermal		LD50 estimated to be > 5,000 mg/kg

3M™ ESPE™ KETAC-FIL PLUS APLICAP POWDER

GLASS POWDER	Ingestion	LD50 estimated to be 2,000 - 5,000 mg/kg
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ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
GLASS POWDER		No data available

Serious Eye Damage/Irritation

Name	Species	Value
GLASS POWDER		No data available

Skin Sensitisation

Name	Species	Value
GLASS POWDER		No data available

Respiratory Sensitisation

Name	Species	Value
GLASS POWDER		No data available

Germ Cell Mutagenicity

Name	Route	Value
Overall product	In Vitro	Not mutagenic
GLASS POWDER	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
GLASS POWDER	Inhalation		Carcinogenic.

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

Name	Route	Value	Species	Test result	Exposure Duration
GLASS POWDER		No data available			

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

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
GLASS POWDER	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		Irritation Positive	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
GLASS POWDER	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification		NOEL N/A	

Aspiration Hazard

Name	Value
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3M™ ESPE™ KETAC-FIL PLUS APLICAP POWDER

GLASS POWDER

Not an aspiration hazard

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

SECTION 12: Ecological information

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

12.1. Toxicity**Acute aquatic hazard:**

Not acutely toxic to aquatic life by GHS criteria.

Chronic aquatic hazard:

Not chronically toxic to aquatic life by GHS criteria.

No product test data available.

Material	CAS Nbr	Organism	Type	Exposure	Test endpoint	Test result
GLASS POWDER	65997-17-3		No data available.			

12.2. Persistence and degradability

No test data available.

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
GLASS POWDER	65997-17-3	No data available.	N/A	N/A	N/A	N/A

12.3 : Bioaccumulative potential

No test data available.

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
GLASS POWDER	65997-17-3	No data available.	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**

3M™ ESPE™ KETAC-FIL PLUS APLICAP POWDER

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

Incinerate in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. 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 material are in compliance with the provisions of the Korean Toxic Chemical Control Law. Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Australia National Industrial Chemical Notification and Assessment Scheme (NICNAS). Certain restrictions may apply. Contact the selling division for additional information. The components of this product are in compliance with the new substance notification requirements of CEPA.

15.2. Chemical Safety Assessment

Not applicable

SECTION 16: Other information

Revision information:

No revision information is available.

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

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

KETAC-CONDITIONER

3M UK PLC
3M CENTRE, CAIN RD,
BRACKNELL, BERKSHIRE RG12 8HT
Tel: 01344 858000

MATERIAL SAFETY DATA SHEET

Document id : 16-2643-1 Issue date : 17/02/2004
Version : 1.03 Supersedes date : 16/07/2003

1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION

Tradename:
KETAC-CONDITIONER

3M Product ID:

2 COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient name and classification	CAS number	Percentage
WATER	7732-18-5	70.0 - 80.0
ACRYLIC ACID, POLYMERS	9003-01-4	20 - 30

3 HAZARDS IDENTIFICATION

Critical hazards:
Irritant. Irritating to eyes and skin.

4 FIRST-AID MEASURES

Eye Contact:
Immediately flush eyes with large amounts of water. Get immediate medical attention.

Skin Contact:
Flush skin with large amounts of water. If irritation persists, get immediate medical attention.

Inhalation:
If signs or symptoms occur, remove person to fresh air. If signs/symptoms continue, call a medical doctor.

Ingestion:
Do not induce vomiting. Drink two glasses of water. Call a medical doctor.

5 FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:

Carbon dioxide, Dry chemical

Hazardous Decomposition:

Irritant vapours or gases.

Fire-Fighting Procedures:

Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, tunic and trousers (leggings), bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

6 ACCIDENTAL RELEASE MEASURES

Personal Precautions:

Observe precautions from other sections.

Methods for Cleaning up:

Contain spill. Cover with absorbent material. Collect as much of the spilled material as possible. Clean up residue with water. Place in a closed container approved for transportation by appropriate authorities.

7 HANDLING AND STORAGE

Precautions for Safe Storage:

Store away from areas where product may come into contact with food or pharmaceuticals. Store at temperatures which are below 26 degrees C.

Fire Prevention:

Not applicable.

Precautions for Safe Handling:

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye Protection:

Avoid eye contact. Safety glasses with side shields.

Hand Protection:

Wear appropriate gloves when handling this material.

Skin Protection:

Avoid prolonged or repeated skin contact.

Respiratory Protection:

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

Ingestion:

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water.

Recommended Ventilation:

Not applicable.

Exposure Limits:

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odour:	Blue odourless liquid.
pH:	Not determined
Boiling point/boiling range:	100.0 C
Melting point/melting range:	Not determined
Flash point:	Not applicable
Autoflammability:	Not determined
Vapour pressure:	16 mmHg
Water Solubility:	Complete
Specific gravity:	Greater than 1 Water=1
Vapour density:	Not determined
Volatile organic compounds:	Not determined
Evaporation rate:	Less Than 1 BuOAc=1
Viscosity:	Not determined
Percent Volatile:	Not determined.

10 STABILITY AND REACTIVITY

Materials to Avoid:
None known.

Hazardous Decomposition:
Stable. Hazardous polymerisation will not occur.

11 TOXICOLOGICAL INFORMATION

Effects from Eye Contact:
Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Effects from Skin Contact:
Moderate Skin Irritation: Signs/symptoms may include localised redness, swelling, itching, and dryness.

Effects from Inhalation:
No adverse health effects are expected.

Effects from Ingestion:
Ingestion may cause: Gastrointestinal Irritation:
Signs/symptoms may include abdominal pain, nausea, diarrhoea and vomiting.

12 ECOLOGICAL INFORMATION

Other Effects and Information:

Not determined. Since regulations vary, consult applicable regulations or authorities before disposal.

13 DISPOSAL CONSIDERATIONS

Special Instructions:

As a disposal alternative, incinerate in an industrial or commercial facility in the presence of a combustible material. Since regulations vary, consult applicable regulations or authorities before disposal.

14 TRANSPORT INFORMATION

UN NUMBER:

UN number:

Not restricted for transportation.

UK ROAD/SEA FREIGHT (IMO) CLASSIFICATION:

Substance Identification Number:

Class:

Packing Group:

Proper Shipping Name:

CDG-ROAD (if applicable)

ADR/RID CLASSIFICATION:

Class:

Item Number:

ICAO/IATA CLASSIFICATION:

Class:

Sub-Risk:

Packing Group:

Proper Shipping Name:

15 REGULATORY INFORMATION

Disclosable Ingredients:

ACRYLIC ACID, POLYMERS

Symbol(s):

(Xi) St. Andrew's Cross (Irritant).

Risk Phrases:

(R36/38) Irritating to eyes and skin.

Safety Phrases:

Avoid contact with the skin and eyes. Wear suitable gloves and

eye and face protection. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. After contact with skin, wash immediately with plenty of soap and water.

16 OTHER INFORMATION

Regulatory Information:

The following UK Regulations as amended may affect the product as supplied: The Chemicals (Hazard Information and Packaging for supply) Regulations, as amended. The Carriage of Dangerous Goods (Classification, Packaging and Labelling) and use of Transportable Pressure Receptacles Regulations 1996, as amended. Carriage of Dangerous Goods by Road regulations, 1996, as amended. The Petroleum (Consolidation) Act 1928. The Control of Substances Hazardous to Health Regulations 1999 as amended.

The Special Waste Regulations 1996, as amended. The Environmental Protection Act, 1990 The Health and Safety at Work Act, 1974.

Reissue date/Reason for reissue.

Reissuing Kit due to added stock numbers.

Intended Use of Product:

Dental restorative.

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KETAC-GLAZE

3M UK PLC
3M CENTRE, CAIN RD,
BRACKNELL, BERKSHIRE RG12 8HT
Tel: 01344 858000

MATERIAL SAFETY DATA SHEET

Document id : 16-2648-0 Issue date : 17/02/2004
Version : 1.02 Supersedes date : 16/07/2003

1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION

Tradename:
KETAC-GLAZE

3M Product ID:
70-2011-0153-5

2 COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient name and classification	CAS number	Percentage
DICYCLOPENTYLDIMETHYLENE DIACRYLATE	42594-17-2	90.0 - 98.0
EU Hazard Symbols and Risk Phrases: EU - 3M Classified (Xi; R:43)		
2-PROPENOIC ACID, 2-METHYL-, 2-(2-HYDROXYETHYL) (3- METHOXYPROPYL)AMINOETHYL ESTER	93962-70-0	1.0 - 5.0

3 HAZARDS IDENTIFICATION

Critical hazards:
Irritant. May cause sensitisation by skin contact.

4 FIRST-AID MEASURES

Eye Contact:
Immediately flush eyes with large amounts of water. Get
immediate medical attention.

Skin Contact:
Immediately wash skin with soap and large amounts of water.
Remove contaminated clothing. If signs/symptoms occur, call a
medical doctor. Wash contaminated clothing before reuse and
dispose of contaminated shoes.

Inhalation:

If signs or symptoms occur, remove person to fresh air. If signs/symptoms continue, call a medical doctor.

Ingestion:

Do not induce vomiting. Drink two glasses of water. Call a medical doctor.

5 FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:

Carbon dioxide, Dry chemical

Hazardous Decomposition:

Irritant vapours or gases.

Fire-Fighting Procedures:

Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, tunic and trousers (leggings), bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

6 ACCIDENTAL RELEASE MEASURES

Personal Precautions:

Observe precautions from other sections.

Methods for Cleaning up:

Ventilate the area with fresh air. Contain spill. Cover with absorbent material. Collect as much of the spilled material as possible. Clean up residue with an appropriate organic solvent. Read and follow safety precautions on the solvent label and health and safety data sheet. Place in a closed container approved for transportation by appropriate authorities.

7 HANDLING AND STORAGE

Precautions for Safe Storage:

Store away from areas where product may come into contact with food or pharmaceuticals. Store at temperatures which are below 26 degrees C.

Fire Prevention:

Not applicable.

Precautions for Safe Handling:

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye Protection:

Avoid eye contact. Safety glasses with side shields.

Hand Protection:

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. Wear appropriate gloves when handling this material.

Skin Protection:
Avoid skin contact.

Respiratory Protection:
Avoid prolonged breathing of vapours.

Ingestion:
Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Do not ingest.

Recommended Ventilation:
Use in a well-ventilated area.

Exposure Limits:

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odour:	Colourless liquid with a slight acrylate odour.
pH:	Not applicable
Boiling point/boiling range:	Greater than 170.0 C @ 0.1 MBAR
Melting point/melting range:	Not applicable
Flash point:	Greater than 180.0 C
Autoflammability:	Not determined
Vapour pressure:	Less Than 0.01 mmHg
Water Solubility:	Nil
Specific gravity:	Greater than 1 Water=1
Vapour density:	Not determined
Volatile organic compounds:	Not determined
Evaporation rate:	Less Than 1 BuOAc=1
Viscosity:	Not determined
Percent Volatile:	Not determined.

10 STABILITY AND REACTIVITY

Materials to Avoid:
Heat.

Hazardous Decomposition:
Stable. Hazardous polymerisation will not occur.

11 TOXICOLOGICAL INFORMATION

Effects from Eye Contact:
Single exposure may cause: Moderate Eye Irritation:
Signs/symptoms may include redness, swelling, pain, tearing,

and blurred or hazy vision.

Effects from Skin Contact:

Single exposure may cause: Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching. Moderate Skin Irritation: Signs/symptoms may include localised redness, swelling, itching, and dryness.

Effects from Inhalation:

Vapours of the uncured product may cause irritation of the respiratory system.

Effects from Ingestion:

Ingestion may cause: Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, nausea, diarrhoea and vomiting.

12 ECOLOGICAL INFORMATION

Other Effects and Information:
Not determined.

13 DISPOSAL CONSIDERATIONS

Special Instructions:

As a disposal alternative, incinerate in an industrial or commercial facility in the presence of a combustible material. Since regulations vary, consult applicable regulations or authorities before disposal.

14 TRANSPORT INFORMATION

UN NUMBER:

UN number: Not restricted for transportation.

UK ROAD/SEA FREIGHT (IMO) CLASSIFICATION:

Substance Identification Number:

Class:

Packing Group:

Proper Shipping Name:

CDG-ROAD (if applicable)

ADR/RID CLASSIFICATION:

Class:

Item Number:

ICAO/IATA CLASSIFICATION:

Class:

Sub-Risk:

Packing Group:

Proper Shipping Name:

15 REGULATORY INFORMATION

Disclosable Ingredients:

DICYCLOPENTYLDIMETHYLENE DIACRYLATE

Symbol(s):

(Xi) St. Andrew's Cross (Irritant).

Risk Phrases:

(R43) May cause sensitisation by skin contact.

Safety Phrases:

Avoid contact with the skin and eyes. Wear suitable gloves. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. After contact with skin, wash immediately with plenty of soap and water. Please read the package insert for additional precautionary warnings.

16 OTHER INFORMATION

Regulatory Information:

The following UK Regulations as amended may affect the product as supplied: The Chemicals (Hazard Information and Packaging for supply) Regulations, as amended. The Carriage of Dangerous Goods (Classification, Packaging and Labelling) and use of Transportable Pressure Receptacles Regulations 1996, as amended. Carriage of Dangerous Goods by Road regulations, 1996, as amended. The Petroleum (Consolidation) Act 1928. The Control of Substances Hazardous to Health Regulations 1999 as amended.

The Special Waste Regulations 1996, as amended. The Environmental Protection Act, 1990 The Health and Safety at Work Act, 1974.

Reissue date/Reason for reissue.

Reissued Kit as new stock numbers added.

Intended Use of Product:

Dental restorative.

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satisfy themselves as to the suitability of the product for their own intended applications.