# Safety Data Sheet



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|---|---|---|---|
| **Document group:** | 16-2703-3 | **Version number:** | 1.00 |
| **Issue Date:** | 28/09/2016 | **Supersedes date:** | Initial issue. |

This Safety Data Sheet has been prepared in accordance with the GHS guidelines & India Hazardous substances (Classification, Labeling & Packaging) Draft Rules 2011.

## IDENTIFICATION

**1.1. Product identifier**
3M™ ESPE™ KETAC™ FIL PLUS APLICAP

**Product Identification Numbers**

| | | | | |
|---|---|---|---|---|
| 70-2011-0108-9 | 70-2011-0112-1 | 70-2011-0403-4 | 70-2011-0404-2 | 70-2011-0406-7 |
| 70-2011-0408-3 | 70-2011-0410-9 | 70-2011-0412-5 | 70-2011-4130-9 | 70-2011-4131-7 |
| 70-2011-4132-5 | 70-2011-4133-3 | 70-2011-4268-7 | 70-2011-4269-5 | 70-2011-4270-3 |
| 70-2011-4271-1 | 70-2011-4272-9 | 70-2011-4273-7 | 70-2011-4274-5 | 70-2011-4275-2 |
| 70-2011-4276-0 | 70-2011-4278-6 | 70-2011-4279-4 | | |

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

**Recommended use**
Dental Product

**Uses advised against**
For use only by Dental Professionals

**1.3. Supplier's details**

**Address:** 3M India Limited, plot-48-51, Electronic city, Hosur road, Bangalore-560100
**Telephone:** 080-39143000, contact Product EHS team
**E Mail:** productehs.in@mmm.com
**Website:** http://solutions.3mindia.co.in

**1.4. Emergency telephone number**
080-39143000 (Contact hours: 8:00 AM to 5:00 PM)

**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:**

30-7032-3, 16-2693-6

## TRANSPORT INFORMATION

Not hazardous for transportation.

**Air Transport (IATA)Regulations**
**UN No** Not applicable
**Proper Shipping Name** Not applicable
**Hazard Classs/Division** Not applicable
**Subsidiary Risk** Not applicable
**Packing Group:** Not applicable

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 India SDSs are available at http://solutions.3mindia.co.in**

# Safety Data Sheet



| | | | |
|---|---|---|---|
| **Document group:** | 16-2693-6 | **Version number:** | 1.00 |
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This Safety Data Sheet has been prepared in accordance with the GHS guidelines & India Hazardous substances (Classification, Labeling & Packaging) Draft Rules 2011.

## SECTION 1: Identification

**1.1. Product identifier**
3M™ ESPE™ KETAC-FIL PLUS APLICAP POWDER

**1.2. Recommended use and restrictions on use**

**Recommended use**
Dental Product, Restorative

**Restrictions on use**
For use by dental professionals only.

**1.3. Supplier's details**

**Address:** 3M India Limited, plot-48-51, Electronic city, Hosur road, Bangalore-560100
**Telephone:** 080-39143000, contact Product EHS team
**E Mail:** productehs.in@mmm.com
**Website:** http://solutions.3mindia.co.in

**1.4. Emergency telephone number**
080-39143000 (Contact hours: 8:00 AM to 5:00 PM)

## SECTION 2: Hazard identification

Under MSIHC Rules, information is noted below on flammability, acute toxicity and explosivity relevant to this product. In line with international standards, information on other hazard classes and associated precautionary statements relevant to this product are included as well.

**2.1. Classification of the substance or mixture**
Acute Toxicity (oral): Category 5.

**2.2. Label elements**
**Signal Word**
WARNING!

**Symbols**

**Pictograms**

**HAZARD STATEMENTS:**
H303 May be harmful if swallowed.

**2.3. Other hazards**
None known.

## SECTION 3: Composition/information on ingredients

| Ingredient | CAS Nbr | % by Wt |
|---|---|---|
| GLASS POWDER | 65997-17-3 | ± 100 |

## SECTION 4: First aid measures

**4.1. Description of first aid measures**

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

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

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

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

**4.2. Most important symptoms and effects, both acute and delayed**
See Section 11.1 Information on toxicological effects

**4.3. Indication of any immediate medical attention and special treatment required**
Not applicable

## SECTION 5: Fire-fighting measures

**5.1. Suitable Extinguishing media**
Material will not burn.

**5.2. Special hazards arising from the substance or mixture**
None inherent in this product.

**Hazardous Decomposition or By-Products**

| Substance | Condition |
|---|---|
| None known. | During combustion. |

**5.3. Special protective actions for fire-fighters**
No special protective actions for fire-fighters are anticipated.

## SECTION 6: Accidental release measures

**6.1. Personal precautions, protective equipment and emergency procedures**

Ventilate the area with fresh air. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

**6.2. Environmental precautions**
Avoid release to the environment.

**6.3. Methods and material for containment and cleaning up**
Collect as much of the spilled material as possible. Use wet sweeping compound or water to avoid dusting. Sweep up. 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.

## SECTION 7: Handling and storage

**7.1. Precautions for safe handling**
Avoid prolonged or repeated skin contact. 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.

## 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 |
|---|---|---|---|---|
| GLASS POWDER | 65997-17-3 | Manufacturer determined | TWA(as dust):10 mg/m3 | |

ACGIH : American Conference of Governmental Industrial Hygienists
AIHA : American Industrial Hygiene Association
CMRG : Chemical Manufacturer's Recommended Guidelines
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling

**8.2. Exposure controls**

**8.2.1. Engineering controls**
Use in a well-ventilated area. 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**

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

**Skin/hand protection**
No protective gloves required. See Section 7.1 for additional information on skin protection.

**Respiratory protection**
None required.

## SECTION 9: Physical and chemical properties

**9.1. Information on basic physical and chemical properties**

| | |
|---|---|
| **Physical state** | Solid. |
| **Specific Physical Form:** | Powder |
| **Appearance/Odour** | Different coloured, odourless powders |
| **Odour threshold** | *No data available.* |
| **pH** | *Not applicable.* |
| **Melting point/Freezing point: NA** | *No data available.* |
| **Boiling point/Initial boiling point/Boiling range** | *Not applicable.* |
| **Flash point** | No flash point |
| **Evaporation rate** | *Not applicable.* |
| **Flammability (solid, gas)** | Not classified |
| **Flammable Limits(LEL)** | *Not applicable.* |
| **Flammable Limits(UEL)** | *Not applicable.* |
| **Vapour pressure** | *Not applicable.* |
| **Vapour density** | *Not applicable.* |
| **Relative density** | >=1 [*Ref Std:*WATER=1] |
| **Water solubility** | Moderate |
| **Solubility- non-water** | *No data available.* |
| **Partition coefficient: n-octanol/water** | *No data available.* |
| **Autoignition temperature** | *No data available.* |
| **Decomposition temperature** | *No data available.* |
| **Viscosity** | *Not applicable.* |
| **Molecular weight** | *No data available.* |
| **Volatile organic compounds (VOC)** | *Not applicable.* |
| **Percent volatile** | *Not applicable.* |
| **VOC less H2O & exempt solvents** | *Not applicable.* |

## 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. | |

Refer to section 5.2 for hazardous decomposition products during combustion.

# 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:**

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

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

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

**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 | Dermal | | LD50 estimated to be > 5,000 mg/kg |
| GLASS POWDER | Ingestion | | LD50 estimated to be 2,000 - 5,000 mg/kg |

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

| Name | Species | Value |
|---|---|---|
| GLASS POWDER | Professional judgement | No significant irritation |

**Serious Eye Damage/Irritation**

| Name | Species | Value |
|---|---|---|
| GLASS POWDER | Professional judgement | No significant irritation |

**Skin Sensitisation**
For the component/components, either no data are currently available or the data are not sufficient for classification.

**Respiratory Sensitisation**
For the component/components, either no data are currently available or the data are not sufficient for classification.

**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 | Multiple animal species | Some positive data exist, but the data are not sufficient for classification |

**Reproductive Toxicity**

**Reproductive and/or Developmental Effects**
For the component/components, either no data are currently available or the data are not sufficient for classification.

**Target Organ(s)**

**Specific Target Organ Toxicity - single exposure**
For the component/components, either no data are currently available or the data are not sufficient for classification.

**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 | Human | NOAEL not available | occupational exposure |

**Aspiration Hazard**
For the component/components, either no data are currently available or the data are 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 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 | | Data not available or insufficient for classification | | | |

**12.2. Persistence and degradability**

| Material | CAS Nbr | Test type | Duration | Study Type | Test result | Protocol |
|---|---|---|---|---|---|---|
| GLASS POWDER | 65997-17-3 | 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 |
|---|---|---|---|---|---|---|
| GLASS POWDER | 65997-17-3 | 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 Other Adverse effects**
No information available.

## SECTION 13: Disposal considerations

**13.1. Disposal methods**
See Section 11.1 Information on toxicological effects

Dispose of waste product in a permitted industrial waste facility.

## SECTION 14: Transport Information

Not hazardous for transportation.

**Air Transport (IATA)Regulations**
**UN No** Not applicable
**Proper Shipping Name** Not applicable
**Hazard Classs/Division** Not applicable
**Subsidiary Risk** Not applicable
**Packing Group:** Not applicable

## 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 Korea

Chemical Control Act. 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. This product complies with Measures on Environmental Management of New Chemical Substances. All ingredients are listed on or exempt from on China IECSC inventory.

**Applicable Environmental, Health and Safety Regulations**
Not applicable

The following ingredients are listed as hazardous on Part II of Schedule I of the India Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) rules
None.

The following ingredients are classified as hazardous based on the criteria listed under Part I of Schedule I of the India Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) rules:
Product is classified as non-hazardous

## SECTION 16: Other information

**NFPA Hazard Classification**
**Health:** 1 **Flammability:** 0 **Instability:** 0 **Special Hazards:** None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

**Revision information:**
No revision information

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**3M India SDSs are available at http://solutions.3mindia.co.in**

# Safety Data Sheet



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|---|---|---|---|
| **Document group:** | 30-7032-3 | **Version number:** | 1.00 |
| **Issue Date:** | 28/09/2016 | **Supersedes date:** | Initial issue. |

This Safety Data Sheet has been prepared in accordance with the GHS guidelines & India Hazardous substances (Classification, Labeling & Packaging) Draft Rules 2011.

## SECTION 1: Identification

**1.1. Product identifier**
3M™ ESPE™ KETAC FIL PLUS APLICAP LIQUID

**1.2. Recommended use and restrictions on use**

**Recommended use**
Dental Product, Restorative

**Restrictions on use**
For use by dental professionals only.

**1.3. Supplier's details**

| | |
|---|---|
| **Address:** | 3M India Limited, plot-48-51, Electronic city, Hosur road, Bangalore-560100 |
| **Telephone:** | 080-39143000, contact Product EHS team |
| **E Mail:** | productehs.in@mmm.com |
| **Website:** | http://solutions.3mindia.co.in |

**1.4. Emergency telephone number**
080-39143000 (Contact hours: 8:00 AM to 5:00 PM)

## SECTION 2: Hazard identification

Under MSIHC Rules, information is noted below on flammability, acute toxicity and explosivity relevant to this product. In line with international standards, information on other hazard classes and associated precautionary statements relevant to this product are included as well.

**2.1. Classification of the substance or mixture**
Not classified as hazardous according to UN GHS criteria.

**2.2. Label elements**
**Signal Word**

**Symbols**

**Pictograms**
Not applicable.

**2.3. Other hazards**
None known.

## SECTION 3: Composition/information on ingredients

| Ingredient | CAS Nbr | % by Wt |
|---|---|---|
| Acrylic acid maleic acid copolymer | 29132-58-9 | 35 - 55 |
| Water | 7732-18-5 | 40 - 55 |
| Tartaric acid | 87-69-4 | 5 - 10 |

## SECTION 4: First aid measures

**4.1. Description of first aid measures**

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

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

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

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

**4.2. Most important symptoms and effects, both acute and delayed**
See Section 11.1 Information on toxicological effects

**4.3. Indication of any immediate medical attention and special treatment required**
Not applicable

## SECTION 5: Fire-fighting measures

**5.1. Suitable Extinguishing media**
Material will not burn.

**5.2. Special hazards arising from the substance or mixture**
None inherent in this product.

**Hazardous Decomposition or By-Products**

| Substance | Condition |
|---|---|
| Irritant vapours or gases. | During combustion. |

**5.3. Special protective actions for fire-fighters**
No special protective actions for fire-fighters are anticipated.

## SECTION 6: Accidental release measures

**6.1. Personal precautions, protective equipment and emergency procedures**
Ventilate the area with fresh air. Observe precautions from other sections.

**6.2. Environmental precautions**
Avoid release to the environment.

**6.3. Methods and material for containment and cleaning up**
Collect as much of the spilled material as possible. Clean up residue with water. Dispose of collected material as soon as possible.

## SECTION 7: Handling and storage

**7.1. Precautions for safe handling**
Avoid prolonged or repeated skin contact. 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.

## SECTION 8: Exposure controls/personal protection

**8.1 Control parameters**

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

**8.2. Exposure controls**

**8.2.1. Engineering controls**
Use in a well-ventilated area.

**8.2.2. Personal protective equipment (PPE)**

**Eye/face protection**

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

**Skin/hand protection**
See Section 7.1 for additional information on skin protection.

**Respiratory protection**
None required.

## SECTION 9: Physical and chemical properties

**9.1. Information on basic physical and chemical properties**

| | |
|---|---|
| **Physical state** | Liquid. |
| **Specific Physical Form:** | Liquid. |
| **Appearance/Odour** | Slightly acidic odour, colourless |
| **Odour threshold** | *No data available.* |
| **pH** | *No data available.* |
| **Melting point/Freezing point: NA** | *Not applicable.* |
| **Boiling point/Initial boiling point/Boiling range** | 100 ºC |

| | |
|---|---|
| **Flash point** | No flash point |
| **Evaporation rate** | *No data available.* |
| **Flammability (solid, gas)** | Not applicable. |
| **Flammable Limits(LEL)** | *Not applicable.* |
| **Flammable Limits(UEL)** | *Not applicable.* |
| **Vapour pressure** | *No data available.* |
| **Vapour density** | *No data available.* |
| **Density** | *No data available.* |
| **Relative density** | >=1 [*Ref Std:*WATER=1] |
| **Water solubility** | Complete |
| **Solubility- non-water** | *No data available.* |
| **Partition coefficient: n-octanol/water** | *No data available.* |
| **Autoignition temperature** | *No data available.* |
| **Decomposition temperature** | *No data available.* |
| **Viscosity** | <=10,000 mPa-s |
| **Molecular weight** | *No data available.* |
| **Volatile organic compounds (VOC)** | *No data available.* |
| **Percent volatile** | *No data available.* |
| **VOC less H2O & exempt solvents** | *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. | |

Refer to section 5.2 for hazardous decomposition products during combustion.

## 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:**

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

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

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

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

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

**Acute Toxicity**

| Name | Route | Species | Value |
|---|---|---|---|
| Overall product | Ingestion | | No data available; calculated ATE >5,000 mg/kg |
| Acrylic acid maleic acid copolymer | Ingestion | Rat | LD50 > 2,000 mg/kg |
| Acrylic acid maleic acid copolymer | Dermal | similar health hazards | LD50 Not available |
| Tartaric acid | Dermal | | LD50 estimated to be 2,000 - 5,000 mg/kg |
| Tartaric acid | Ingestion | Mouse | LD50 4,360 mg/kg |

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**
For the component/components, either no data are currently available or the data are not sufficient for classification.

**Serious Eye Damage/Irritation**
For the component/components, either no data are currently available or the data are not sufficient for classification.

**Skin Sensitisation**
For the component/components, either no data are currently available or the data are not sufficient for classification.

**Respiratory Sensitisation**
For the component/components, either no data are currently available or the data are not sufficient for classification.

**Germ Cell Mutagenicity**
For the component/components, either no data are currently available or the data are not sufficient for classification.

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

**Reproductive Toxicity**

**Reproductive and/or Developmental Effects**
For the component/components, either no data are currently available or the data are not sufficient for classification.

**Target Organ(s)**

**Specific Target Organ Toxicity - single exposure**
For the component/components, either no data are currently available or the data are not sufficient for classification.

**Specific Target Organ Toxicity - repeated exposure**
For the component/components, either no data are currently available or the data are not sufficient for classification.

**Aspiration Hazard**
For the component/components, either no data are currently available or the data are 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 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 |
|---|---|---|---|---|---|---|
| Tartaric acid | 87-69-4 | | Data not available or insufficient for classification | | | |
| Acrylic acid maleic acid copolymer | 29132-58-9 | Water flea | Experimental | 48 hours | EC50 | >100 mg/l |
| Acrylic acid maleic acid copolymer | 29132-58-9 | Zebra Fish | Experimental | 96 hours | LC50 | >100 mg/l |
| Acrylic acid maleic acid copolymer | 29132-58-9 | Zebra Fish | Experimental | 14 days | NOEC | 40 mg/l |
| Acrylic acid maleic acid copolymer | 29132-58-9 | Water flea | Experimental | 21 days | NOEC | 350 mg/l |
| Acrylic acid maleic acid copolymer | 29132-58-9 | Green algae | Experimental | 96 hours | Effect Concentration 10% | 32 mg/l |

**12.2. Persistence and degradability**

| Material | CAS Nbr | Test type | Duration | Study Type | Test result | Protocol |
|---|---|---|---|---|---|---|
| Water | 7732-18-5 | Data not | N/A | N/A | N/A | N/A |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | available or insufficient for classification | | | | |
| Tartaric acid | 87-69-4 | Experimental Biodegradation | 14 days | BOD | 76 % weight | Other methods |
| Acrylic acid maleic acid copolymer | 29132-58-9 | Experimental Biodegradation | 28 days | BOD | < 14 % weight | Other methods |

**12.3 : Bioaccumulative potential**

| Material | CAS Nbr | Test type | Duration | Study Type | Test result | Protocol |
|---|---|---|---|---|---|---|
| Water | 7732-18-5 | Data not available or insufficient for classification | N/A | N/A | N/A | N/A |
| Acrylic acid maleic acid copolymer | 29132-58-9 | Data not available or insufficient for classification | N/A | N/A | N/A | N/A |
| Tartaric acid | 87-69-4 | Estimated Bioconcentration | | Log Kow | -1.00 | Estimated: Octanol-water partition coefficient |

**12.4. Mobility in soil**
Please contact manufacturer for more details

**12.5 Other Adverse effects**
No information available.

## SECTION 13: Disposal considerations

**13.1. Disposal methods**
See Section 11.1 Information on toxicological effects

Dispose of waste product in a permitted industrial waste facility.

## SECTION 14: Transport Information

Not hazardous for transportation.

**Air Transport (IATA)Regulations**
**UN No** Not applicable
**Proper Shipping Name** Not applicable
**Hazard Classs/Division** Not applicable
**Subsidiary Risk** Not applicable
**Packing Group:** Not applicable

## SECTION 15: Regulatory information

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

**Global inventory status**
Contact 3M for more information. The components of this product are in compliance with the new substance notification

requirements of CEPA. This product complies with Measures on Environmental Management of New Chemical Substances. All ingredients are listed on or exempt from on China IECSC inventory.

**Applicable Environmental, Health and Safety Regulations**
Not applicable

The following ingredients are listed as hazardous on Part II of Schedule I of the India Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) rules
None.

The following ingredients are classified as hazardous based on the criteria listed under Part I of Schedule I of the India Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) rules:
Product is classified as non-hazardous

## SECTION 16: Other information

**NFPA Hazard Classification**
**Health:** 1 **Flammability:** 0 **Instability:** 0 **Special Hazards:** None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

**Revision information:**
No revision information

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

**3M India SDSs are available at http://solutions.3mindia.co.in**