



Safety Data Sheet

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Document group:	34-2666-5	Version number:	2.00
Issue Date:	18/08/2025	Supersedes date:	26/09/2016

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

Ketac™ Universal (61085, 61104, 61105, 61106, 61107, 61108, 61109, 61110, 61111, 61112)

Product Identification Numbers

70-2011-4391-7	70-2011-4400-6	70-2011-4401-4	70-2011-4402-2	70-2011-4403-0
70-2011-4404-8	70-2011-4405-5	70-2011-4406-3	70-2011-4407-1	70-2011-4408-9
UU-0125-2782-4				

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

Recommended use

Dental Product

Uses advised against

For use by dental professionals only.

1.3. Supplier's details

Address: KCI Medical India Private Limited, S - 327, Greater Kailash - II, New Delhi, Delhi, 110048, India
Telephone: 1-855-423-6725
E Mail: psops_supportteam@solventum.com
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1.4. Emergency telephone number

CHEMTREC 1-800-424-9300 OR 1-703-527-3887, Contract number# 1015211

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:

34-2072-6, 34-2067-6

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

Marine Transport (IMDG)

UN No Not applicable

Proper Shipping Name Not applicable

Hazard Classs/Division Not applicable

Subsidiary Risk Not applicable

Packing Group: Not applicable

Environmental Hazards: Not applicable

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Safety Data Sheet

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Document group:	34-2067-6	Version number:	1.02
Issue Date:	18/08/2025	Supersedes date:	05/12/2020

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™ Ketac™ Universal Liquid (61111)

1.2. Recommended use and restrictions on use

Recommended use

Dental Product, Glass Ionomer Filling Material

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:	080-45543000, contact Product EHS team
E Mail:	productehs.in@mmm.com
Website:	http://solutions.3mindia.co.in

1.4. Emergency telephone number

080-45543000 (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

Not applicable.

Symbols

Not applicable

Pictograms

Not applicable

2.3. Other hazards

Eye damage/irrit. class not applied based on test data in similar mix A similar mixture has been tested for eye damage/irritation and the test results do not meet the criteria for classification. A similar mixture has been tested for skin corrosion/irritation and the test results do not meet the criteria for classification.

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	CAS Nbr	% by Wt
Water	7732-18-5	40 - 60
Acrylic acid-maleic acid copolymer	29132-58-9	30 - 50
Tartaric acid	87-69-4	<= 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

No need for first aid is anticipated.

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

No critical symptoms or effects. 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**

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**

Irritant vapours or gases.

Condition

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

Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Observe precautions from other sections.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Contain spill. For large spills, if necessary, get assistance from professional spill clean up team. For small spills, carefully cover the spill with soda ash (sodium carbonate) or sodium bicarbonate. Work from around the perimeter inward. Avoid splashing. Add enough water to ease mixing and stir. Continue stirring and adding water and neutralizing agent until the reaction stops. Let cool before collecting. Or use a commercially available 'Acid spill' clean-up kit. Follow the kit directions exactly, as specified. Collect as much of the spilled material as possible. Place in a metal container approved for use in transportation by appropriate authorities. The container must be lined with polyethylene plastic or contain a plastic drum liner made of polyethylene. Clean up residue with water. Cover, but do not seal for 48 hours. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

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. Avoid release to the environment. Keep away from reactive metals (eg. Aluminum, zinc etc.) to avoid the formation of hydrogen gas that could create an explosion hazard.

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.
Color	Colorless
Odor	Slight Acidic
Odour threshold	<i>No data available.</i>
pH	< 2
Melting point/Freezing point: NA	<i>Not applicable.</i>
Boiling point/Initial boiling point/Boiling range	100 °C
Flash point	No flash point
Evaporation rate	<i>No data available.</i>
Flammability	Not applicable.
Flammable Limits(LEL)	<i>Not applicable.</i>
Flammable Limits(UEL)	<i>Not applicable.</i>
Vapour pressure	<i>No data available.</i>
Relative Vapor Density	<i>No data available.</i>
Density	<i>No data available.</i>
Relative density	>=1 [Ref Std: WATER=1]
Water solubility	Complete
Solubility- non-water	<i>No data available.</i>
Partition coefficient: n-octanol/water	<i>No data available.</i>
Autoignition temperature	<i>No data available.</i>
Decomposition temperature	<i>No data available.</i>
Kinematic Viscosity	10,000 mm ² /sec
Volatile organic compounds (VOC)	<i>No data available.</i>
Percent volatile	<i>No data available.</i>
VOC less H₂O & exempt solvents	<i>No data available.</i>
Molecular weight	<i>No data available.</i>

Particle Characteristics	<i>Not applicable.</i>
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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

<u>Substance</u>	<u>Condition</u>
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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 > 5,000 mg/kg
Acrylic acid-maleic acid copolymer	Dermal	similar health hazards	LD50 estimated to be > 5,000 mg/kg
Tartaric acid	Dermal	Rat	LD50 > 2,000 mg/kg
Tartaric acid	Ingestion	Rat	LD50 > 2,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Acrylic acid-maleic acid copolymer	Rabbit	No significant irritation
Tartaric acid	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Acrylic acid-maleic acid copolymer	Rabbit	No significant irritation

Tartaric acid	In vitro data	Corrosive
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Sensitization:**Skin Sensitisation**

Name	Species	Value
Acrylic acid-maleic acid copolymer	Guinea pig	Not classified
Tartaric acid	Mouse	Not classified

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
Acrylic acid-maleic acid copolymer	In Vitro	Not mutagenic
Acrylic acid-maleic acid copolymer	In vivo	Not mutagenic
Tartaric acid	In Vitro	Not mutagenic
Tartaric acid	In vivo	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Tartaric acid	Ingestion	Rat	Not carcinogenic

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

Name	Route	Value	Species	Test result	Exposure Duration
Acrylic acid-maleic acid copolymer	Ingestion	Not classified for development	Rat	NOAEL 6,670 mg/kg/day	during organogenesis
Tartaric acid	Ingestion	Not classified for development	Rat	NOAEL 181 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
Tartaric acid	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	Irritation Positive	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Acrylic acid-maleic acid copolymer	Dermal	hematopoietic system	Not classified	Rabbit	NOAEL 2,000 mg/kg/day	28 days
Acrylic acid-maleic acid copolymer	Inhalation	respiratory system	Not classified	Rat	NOAEL 0.005 mg/l	13 weeks
Acrylic acid-maleic acid copolymer	Ingestion	eyes kidney and/or bladder	Not classified	Rat	NOAEL 1,871 mg/kg/day	90 days

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
Acrylic acid-maleic acid copolymer	29132-58-9	Activated sludge	Experimental	N/A	EC50	>100 mg/l
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	Green algae	Experimental	96 hours	EC10	32 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	Zebra Fish	Experimental	14 days	NOEC	40 mg/l
Tartaric acid	87-69-4	Activated sludge	Experimental	3 hours	N/A	>1,000 mg/l
Tartaric acid	87-69-4	Green algae	Experimental	72 hours	EC50	51.4 mg/l
Tartaric acid	87-69-4	Water flea	Experimental	48 hours	EC50	93.3 mg/l
Tartaric acid	87-69-4	Zebra Fish	Experimental	96 hours	LC50	>100 mg/l
Tartaric acid	87-69-4	Green algae	Experimental	72 hours	NOEC	3.1 mg/l

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Acrylic acid-maleic acid copolymer	29132-58-9	Experimental Biodegradation	28 days	BOD	< 14 %BOD/ThOD	
Tartaric acid	87-69-4	Analogous Compound Biodegradation	14 days	BOD	76 %BOD/ThOD	OECD 301C - MITI test (I)
Tartaric acid	87-69-4	Experimental Biodegradation	28 days	BOD	85 %BOD/ThOD	OECD 306(Misc)-Biodegrad. Seaw

12.3 : Bioaccumulative potential

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Acrylic acid-maleic	29132-58-9	Data not available	N/A	N/A	N/A	N/A

acid copolymer		or insufficient for classification				
Tartaric acid	87-69-4	Experimental Bioconcentration		Log Kow	-1.91	OECD 107 log Kow shke flask mtd

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**

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

Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility.

SECTION 14: Transport Information

Not hazardous for transportation.

Air Transport (IATA) Regulations

UN No Not applicable

Proper Shipping Name Not applicable

Hazard Class/Division Not applicable

Subsidiary Risk Not applicable

Packing Group: Not applicable

Marine Transport (IMDG)

UN No Not applicable

Proper Shipping Name Not applicable

Hazard Class/Division Not applicable

Subsidiary Risk Not applicable

Packing Group: Not applicable

Environmental Hazards: 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

The Manufacture, Storage and Import of Hazardous Chemical Rules, 1989

The Bio Medical Waste (Management & Handling) Rules, 1998

Hazardous Chemicals (Classification, Packaging and Labelling Draft Rules), 2011

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:
The product is classified as Non-Hazardous as per MSIHC Rules, 1989.

SECTION 16: Other information

NFPA Hazard Classification

Health: 1 **Flammability:** 1 **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:

Section 1: Product name information was modified.
Section 02: GHS Classification Statements information was added.
Section 02: GHS Pictogram Not Applicable information was added.
Section 02: GHS Signal Word - Not applicable information was added.
Section 02: GHS Symbol Text - Not applicable information was added.
Section 2: Hazard - Other information was modified.
Label: GHS Classification information was deleted.
Label: Graphic information was deleted.
Section 2: Ingredient table information was modified.
Section 4: First aid for skin contact information information was modified.
Section 04: Information on toxicological effects information was deleted.
Section 6: Accidental release clean-up information information was modified.
Section 9: Flammability (solid, gas) information information was deleted.
Section 09: Flammability information information was added.
Section 09: Kinematic Viscosity information information was added.
Section 09: Nanoparticle information was deleted.
Section 09: Particle Characteristics N/A information was added.
Section 09: Vapor Density Value information was modified.
Section 09: Viscosity information was deleted.
Section 11: Acute Toxicity table information was modified.
Section 11: Carcinogenicity Table information was added.
Section 11: Carcinogenicity text information was deleted.
Section 11: Germ Cell Mutagenicity Table information was added.
Section 11: Germ Cell Mutagenicity text information was deleted.
Section 11: Reproductive and/or Developmental Effects text information was added.
Section 11: Reproductive Toxicity Table information was added.
Section 11: Serious Eye Damage/Irritation Table information was modified.
Section 11: Skin Corrosion/Irritation Table information was added.
Section 11: Skin Corrosion/Irritation text information was deleted.
Section 11: Skin Sensitization Table information was added.
Section 11: Skin Sensitization text information was deleted.
Section 11: Specific Target Organ Toxicity - repeated exposure text information was deleted.
Section 11: Specific Target Organ Toxicity - single exposure text information was deleted.
Section 11: Target Organs - Repeated Table information was added.
Section 11: Target Organs - Single Table information was added.
Section 12: Component ecotoxicity information information was modified.
Section 12: Persistence and Degradability information information was modified.
Section 12: Bioaccumulative potential information information was modified.

DISCLAIMER: The information in this Safety Data Sheet (SDS) 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 SDS or use of the product in combination with other materials. For these reasons, it is important that customers carry out their own evaluation to satisfy themselves as to the suitability of the product for their own intended applications. In addition, this SDS is being provided to convey health and safety information. If you are the importer of record of this product into India, you are responsible to comply with all applicable regulatory requirements, including, but not limited to, product registrations/notifications, substance volume tracking, and potential substance registration/notification.

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Document group:	34-2072-6	Version number:	1.02
Issue Date:	18/08/2025	Supersedes date:	05/12/2020

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™ Ketac™ Universal Powder

1.2. Recommended use and restrictions on use

Recommended use

Dental Product, Glass Ionomer Filling Material

Restrictions on use

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: 080-45543000, contact Product EHS team
E Mail: productehs.in@mmm.com
Website: <http://solutions.3mindia.co.in>

1.4. Emergency telephone number

080-45543000 (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

Not applicable

Pictograms

Not applicable

HAZARD STATEMENTS:

H303 May be harmful if swallowed.

2.3. Other hazards

None known.

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	CAS Nbr	% by Wt
Glass, oxide, chemicals	65997-17-3	> 95

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

No critical symptoms or effects. 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**

None known.

Condition

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

Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. 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. 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 in accordance with applicable local/regional/national/international regulations.

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	Solid.
Specific Physical Form:	Powder

Color	Tooth
Odor	Odourless
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	Not applicable.
Flammable Limits(LEL)	Not applicable.
Flammable Limits(UEL)	Not applicable.
Vapour pressure	Not applicable.
Relative Vapor 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.
Kinematic Viscosity	Not applicable.
Volatile organic compounds (VOC)	Not applicable.
Percent volatile	Not applicable.
VOC less H ₂ O & exempt solvents	Not applicable.
Molecular weight	No data available.

Particle Characteristics	Not applicable.
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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

None known.

Condition

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 ATE >2,000 - =5,000 mg/kg
Glass, oxide, chemicals	Dermal		LD50 estimated to be > 5,000 mg/kg
Glass, oxide, chemicals	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Glass, oxide, chemicals	Professional judgement	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Glass, oxide, chemicals	Professional judgement	No significant irritation

Sensitization:

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
Glass, oxide, chemicals	65997-17-3	N/A	Data not available or insufficient for classification	N/A	N/A	N/A

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Glass, oxide, chemicals	65997-17-3	Data not available-insufficient	N/A	N/A	N/A	N/A

12.3 : Bioaccumulative potential

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Glass, oxide, chemicals	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

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

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 Class/Division Not applicable

Subsidiary Risk Not applicable

Packing Group: Not applicable

Marine Transport (IMDG)

UN No Not applicable

Proper Shipping Name Not applicable

Hazard Class/Division Not applicable

Subsidiary Risk Not applicable

Packing Group: Not applicable

Environmental Hazards: 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

The Manufacture, Storage and Import of Hazardous Chemical Rules, 1989

The Bio Medical Waste (Management & Handling) Rules, 1998

Hazardous Chemicals (Classification, Packaging and Labelling Draft Rules), 2011

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:

The product is classified as Non-Hazardous as per MSIHC Rules, 1989.

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:

Section 02: GHS Pictogram Not Applicable information was added.

Section 02: GHS Symbol Text - Not applicable information was added.

Label: GHS Classification information was modified.

Label: Signal Word information was modified.

Section 2: Ingredient table information was modified.

Section 04: Information on toxicological effects information was deleted.

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

Section 09: Flammability information information was added.

Section 09: Kinematic Viscosity information information was added.

Section 09: Nanoparticle information was deleted.

Section 09: Particle Characteristics N/A information was added.

Section 09: Vapor Density Value information was modified.

Section 09: Viscosity information was deleted.

Section 11: Acute Toxicity table information was modified.

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

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

Section 12: Component ecotoxicity information information was modified.

Section 12: Persistence and Degradability information information was modified.

Section 12: Bioaccumulative potential information information was modified.

DISCLAIMER: The information in this Safety Data Sheet (SDS) 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 SDS or use of the product in combination with other materials. For these reasons, it is important that customers carry out their own evaluation to satisfy themselves as to the suitability of the product for their own intended applications. In addition, this SDS is being provided to convey health and safety information. If you are the importer of record of this product into India, you are responsible to

comply with all applicable regulatory requirements, including, but not limited to, product registrations/notifications, substance volume tracking, and potential substance registration/notification.

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