



Safety Data Sheet

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Document group:	24-8575-3	Version number:	2.00
Issue Date:	27/10/2025	Supersedes date:	03/08/2025

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

Protemp™ 4 Refill (46954, 46956, 46957, 46959, 46960, 46972)

Product Identification Numbers

70-2011-3259-7	70-2011-3261-3	70-2011-3262-1	70-2011-3264-7	70-2011-3265-4
70-2011-3759-6	70-2011-4169-7	70-2011-4170-5	HB-0041-6104-6	HB-0041-6117-8
HB-0041-6140-0	HB-0041-6145-9	HB-0041-6152-5	HB-0043-8243-6	UU-0123-4948-4
UU-0123-4962-5	UU-0123-4963-3	UU-0132-3963-5	UU-0132-3969-2	UU-0133-1149-1

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

Recommended use

Dental Material

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:

24-8558-9, 24-8565-4

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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Solventum India SDSs are available at [Solventum.com](https://www.solventum.com)



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Document group:	24-8558-9	Version number:	2.00
Issue Date:	20/10/2025	Supersedes date:	03/08/2025

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

Protemp™ 4 Catalyst Paste

1.2. Recommended use and restrictions on use

Recommended use

Dental Material, Temporary crown and bridge material

Restrictions on use

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

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.

Acute Toxicity (dermal): Category 5.

Acute Aquatic Toxicity: Category 3.

2.2. Label elements

Signal Word

Warning

Symbols

Not applicable

Pictograms

Not applicable

HAZARD STATEMENTS:

H303 + H313

May be harmful if swallowed or in contact with skin.

H402

Harmful to aquatic life.

2.3. Other hazards

None known.

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	CAS Nbr	% by Wt
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxy)]bisethyldiacetate	19224-29-4	70 - 80
SILANE TREATED SILICA	68909-20-6	5 - 15
Benzyl-phenyl-barbituric acid	72846-00-5	5 - 15
(1-methylethylidene)bis(4,1-phenyleneoxy-2,1-ethanediyl)(1-phenyleneoxy-2,2'ethoxyethanediyl)bisacetate	None	1 - 10
Tert-butyl 3,5,5-trimethylperoxyhexanoate	13122-18-4	< 0.4

SECTION 4: First aid measures**4.1. Description of first aid measures****Inhalation**

No need for first aid is anticipated. If symptoms develop, remove the affected person to fresh air. Get medical attention.

Skin contact

Wash with soap and water. If you feel unwell, get medical attention.

Eye contact

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

If swallowed

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

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

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**

Carbon monoxide.

Carbon dioxide.

Irritant vapours or gases.

Condition

During combustion.

During combustion.

During combustion.

5.3. Special protective actions for fire-fighters

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

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.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue. Seal the container. Dispose of collected material as soon as possible 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. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid release to the environment.

7.2. Conditions for safe storage including any incompatibilities

Store away from heat.

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:	Paste
Color	White
Odor	Slight Acidic
Odour threshold	<i>No data available.</i>
pH	<i>Not applicable.</i>
Melting point/Freezing point: NA	<i>No data available.</i>
Boiling point/Initial boiling point/Boiling range	<i>No data available.</i>
Flash point	No flash point
Evaporation rate	<i>No data available.</i>
Flammability	Not applicable.
Flammable Limits(LEL)	<i>No data available.</i>
Flammable Limits(UEL)	<i>No data available.</i>
Vapour pressure	<i>No data available.</i>
Relative Vapor Density	<i>No data available.</i>
Density	1.2 g/cm3 - 1.3 g/cm3
Relative density	1.2 - 1.3 [Ref Std: WATER=1]
Water solubility	Negligible
Solubility- non-water	<i>No data available.</i>
Partition coefficient: n-octanol/water	<i>No data available.</i>
Autoignition temperature	<i>No data available.</i>
Decomposition temperature	<i>No data available.</i>
Kinematic Viscosity	<i>No data available.</i>
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

Heat.

10.5 Incompatible materials

None known.

10.6 Hazardous decomposition products

Substance

None known.

Condition

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not 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

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

Skin contact

May be harmful in contact with skin.

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

Eye contact

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

Ingestion

May be harmful if swallowed.

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

Toxicological Data

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

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE >2,000 - =5,000 mg/kg
Overall product	Ingestion		No data available; calculated ATE >2,000 - =5,000 mg/kg
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxy)]bisethyldiacetate	Dermal	Professional judgement	LD50 estimated to be 2,000 - 5,000 mg/kg

		nt	
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxy)]bisethyldiacetate	Ingestion	Rat	LD50 > 2,000 mg/kg
Benzyl-phenyl-barbituric acid	Ingestion	Rat	LD50 > 300, <2000 mg/kg
SILANE TREATED SILICA	Ingestion	Rat	LD50 > 2,000 mg/kg
SILANE TREATED SILICA	Dermal	similar health hazards	LD50 estimated to be > 5,000 mg/kg
Tert-butyl 3,5,5-trimethylperoxyhexanoate	Dermal	Rat	LD50 > 2,000 mg/kg
Tert-butyl 3,5,5-trimethylperoxyhexanoate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.8 mg/l
Tert-butyl 3,5,5-trimethylperoxyhexanoate	Ingestion	Rat	LD50 12,905 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxy)]bisethyldiacetate	In vitro data	No significant irritation
Benzyl-phenyl-barbituric acid	In vitro data	No significant irritation
SILANE TREATED SILICA	Rabbit	No significant irritation
Tert-butyl 3,5,5-trimethylperoxyhexanoate	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxy)]bisethyldiacetate	In vitro data	No significant irritation
Benzyl-phenyl-barbituric acid	In vitro data	Severe irritant
SILANE TREATED SILICA	Rabbit	No significant irritation
Tert-butyl 3,5,5-trimethylperoxyhexanoate	Rabbit	No significant irritation

Sensitization:

Skin Sensitisation

Name	Species	Value
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxy)]bisethyldiacetate	Mouse	Not classified
Benzyl-phenyl-barbituric acid	Guinea pig	Not classified
SILANE TREATED SILICA	Guinea pig	Not classified
Tert-butyl 3,5,5-trimethylperoxyhexanoate	Guinea pig	Sensitising

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
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxy)]bisethyldiacetate	In Vitro	Not mutagenic
Benzyl-phenyl-barbituric acid	In Vitro	Not mutagenic
SILANE TREATED SILICA	In Vitro	Not mutagenic

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

Name	Route	Value	Species	Test result	Exposure Duration
SILANE TREATED SILICA	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
SILANE TREATED SILICA	Ingestion	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation

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

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Benzyl-phenyl-barbituric acid	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
SILANE TREATED SILICA	Inhalation	respiratory system	May cause damage to organs though prolonged or repeated exposure	Rat	LOAEL 0.035 mg/l	13 weeks
SILANE TREATED SILICA	Inhalation	hematopoietic system kidney and/or bladder	Not classified	Rat	NOAEL 0.035 mg/l	13 weeks
SILANE TREATED SILICA	Ingestion	liver	Not classified	Rat	NOAEL 1,000 mg/kg/day	5 weeks

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:**

GHS Acute 3: Harmful to aquatic life.

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
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxy)]bise	19224-29-4	Green algae	Experimental	72 hours	EC50	>100 mg/l

thylacetate						
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxy)]bis thylacetate	19224-29-4	Green algae	Experimental	72 hours	NOEC	100 mg/l
Benzyl-phenyl-barbituric acid	72846-00-5	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
SILANE TREATED SILICA	68909-20-6	Green algae	Experimental	72 hours	ErC50	>10,000 mg/l
SILANE TREATED SILICA	68909-20-6	Water flea	Experimental	24 hours	EC50	>1,000 mg/l
SILANE TREATED SILICA	68909-20-6	Zebra Fish	Experimental	96 hours	LC50	>10,000 mg/l
Tert-butyl 3,5,5-trimethylperoxyhexanoate	13122-18-4	Green algae	Experimental	72 hours	ErC50	0.51 mg/l
Tert-butyl 3,5,5-trimethylperoxyhexanoate	13122-18-4	Rainbow trout	Experimental	96 hours	LC50	7.03 mg/l
Tert-butyl 3,5,5-trimethylperoxyhexanoate	13122-18-4	Water flea	Experimental	48 hours	EC50	>100 mg/l
Tert-butyl 3,5,5-trimethylperoxyhexanoate	13122-18-4	Green algae	Experimental	72 hours	NOEC	0.125 mg/l
Tert-butyl 3,5,5-trimethylperoxyhexanoate	13122-18-4	Water flea	Experimental	21 days	NOEC	0.22 mg/l
Tert-butyl 3,5,5-trimethylperoxyhexanoate	13122-18-4	Activated sludge	Experimental	3 hours	EC50	327.02 mg/l

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxy)]bis thylacetate	19224-29-4	Experimental Biodegradation	28 days	CO2 evolution	8-13 %CO2 evolution/THCO2 evolution	OECD 301B - Modified Sturm or CO2
Benzyl-phenyl-barbituric acid	72846-00-5	Experimental Biodegradation	28 days	CO2 evolution	29.1 %CO2 evolution/THCO2 evolution	OECD 301B - Modified Sturm or CO2
Benzyl-phenyl-barbituric acid	72846-00-5	Estimated Photolysis		Photolytic half-life (in air)	1.48 days (t 1/2)	
SILANE TREATED SILICA	68909-20-6	Data not available-insufficient	N/A	N/A	N/A	N/A
Tert-butyl 3,5,5-trimethylperoxyhexanoate	13122-18-4	Experimental Biodegradation	28 days	BOD	72 %BOD/ThOD	OECD 301D - Closed bottle test
Tert-butyl 3,5,5-trimethylperoxyhexanoate	13122-18-4	Experimental Aquatic Inherent Biodegrad.	56 days	BOD	58 %BOD/ThOD	OECD 302A - Modified SCAS Test
Tert-butyl 3,5,5-trimethylperoxyhexanoate	13122-18-4	Experimental Hydrolysis		Hydrolytic half-life (pH 7)	51 hours (t 1/2)	OECD 111 Hydrolysis func of pH

12.3 : Bioaccumulative potential

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxy)]bisethyldiacetate	19224-29-4	Estimated Bioconcentration		Log Kow	7.16	
Benzyl-phenyl-barbituric acid	72846-00-5	Experimental Bioconcentration		Log Kow	2.57	
SILANE TREATED SILICA	68909-20-6	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Tert-butyl 3,5,5-trimethylperoxyhexanoate	13122-18-4	Modeled Bioconcentration		Bioaccumulation factor	380	Catalogic™
Tert-butyl 3,5,5-trimethylperoxyhexanoate	13122-18-4	Experimental Bioconcentration		Log Kow	5.16	OECD 117 log Kow HPLC method

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.

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: 0 **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: Address information was modified.

Company Telephone information was modified.

Section 1: E-mail address information was modified.

Section 1: Emergency telephone information was modified.

Section 1: Product name information was modified.

Section 12: Component ecotoxicity information information was modified.

Section 16: Web address information was modified.

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Solventum India SDSs are available at Solventum.com



Safety Data Sheet

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Document group:	24-8565-4	Version number:	1.01
Issue Date:	03/08/2025	Supersedes date:	22/09/2016

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™ Protemp™ 4 Base Paste

1.2. Recommended use and restrictions on use

Recommended use

Dental Material, Temporary crown and bridge 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

Specific Target Organ Toxicity (repeated exposure): Category 2.

2.2. Label elements

Signal Word

Warning

Symbols

Health Hazard |

Pictograms**HAZARD STATEMENTS:**

H373

May cause damage to organs through prolonged or repeated exposure: respiratory system.

PRECAUTIONARY STATEMENTS**Prevention:**

P260

Do not breathe dust/fume/gas/mist/vapours/spray.

2.3. Other hazards

Eye damage/irritation class. not applied based on test data This material has been tested for eye damage/irritation and the test results do not meet the criteria for classification. Repeated exposure may cause skin dryness or cracking.

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	CAS Nbr	% by Wt
Dimethacrylate (BISEMA6)	41637-38-1	45 - 55
Silane treated Silica	2968358-00-9	20 - 30
Silane treated Silica	68909-20-6	5 - 15
Methacrylated Polyurethan	1101874-33-2	10 - 15

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

Target organ effects following prolonged or repeated exposure. See Section 11 for additional details.

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**

Carbon monoxide.

Carbon dioxide.

Irritant vapours or gases.

Condition

During combustion.

During combustion.

During combustion.

5.3. Special protective actions for fire-fighters

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

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.

6.2. Environmental precautions

Not applicable.

6.3. Methods and material for containment and cleaning up

Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue. Seal the container. Dispose of collected material as soon as possible 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. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling.

7.2. Conditions for safe storage including any incompatibilities

Store away from heat.

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. Paste
Specific Physical Form:	Paste
Color	Tooth
Odor	Slight Acrylic
Odour threshold	No data available.
pH	Not applicable.
Melting point/Freezing point: NA	No data available.
Boiling point/Initial boiling point/Boiling range	No data available.
Flash point	No flash point
Evaporation rate	No data available.
Flammability	Not applicable.
Flammable Limits(LEL)	Not applicable.
Flammable Limits(UEL)	Not applicable.
Vapour pressure	No data available.
Relative Vapor Density	No data available.
Density	1.3 g/cm3 - 1.4 g/cm3
Relative density	1.3 - 1.4 [Ref Std: WATER=1]
Water solubility	Negligible
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	No data available.
Volatile organic compounds (VOC)	Not applicable.
Percent volatile	Not applicable.
VOC less H2O & 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 may be reactive with certain agents under certain conditions - see the remaining headings in this section

10.2 Chemical stability

Stable.

10.3 Possibility of hazardous reactions

Hazardous polymerisation will not occur.

10.4 Conditions to avoid

Heat.

10.5 Incompatible materials

None known.

10.6 Hazardous decomposition products**Substance****Condition**

None known.

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not 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

May cause additional health effects (see below).

Skin contact

Prolonged or repeated exposure may cause: Dermal Defatting: Signs/symptoms may include localized redness, itching, drying and cracking of skin. Dermal Defatting: Signs/symptoms may include localised redness, itching, drying and cracking of skin.

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.

Additional Health Effects:**Prolonged or repeated exposure may cause target organ effects:**

Respiratory effects: Signs/symptoms may include cough, shortness of breath, chest tightness, wheezing, increased heart rate, bluish coloured skin (cyanosis), sputum production, changes in lung function tests, and respiratory failure.

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
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Overall product	Dermal		No data available; calculated ATE >5,000 mg/kg
Overall product	Inhalation-Dust/Mist(4 hr)		No data available; calculated ATE >12.5 mg/l
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
Dimethacrylate (BISMA6)	Dermal	Rat	LD50 > 2,000 mg/kg
Dimethacrylate (BISMA6)	Ingestion	Rat	LD50 > 2,000 mg/kg
Methacrylated Polyurethan	Dermal		LD50 estimated to be 2,000 - 5,000 mg/kg
Methacrylated Polyurethan	Ingestion	Rat	LD50 > 2,000 mg/kg
Silane treated Silica	Ingestion	Rat	LD50 > 2,000 mg/kg
Silane treated Silica	Dermal	similar health hazards	LD50 estimated to be > 5,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Dimethacrylate (BISMA6)	In vitro data	No significant irritation
Methacrylated Polyurethan	Rabbit	Minimal irritation
Silane treated Silica	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Overall product	Rabbit	Mild irritant
Dimethacrylate (BISMA6)	In vitro data	No significant irritation
Methacrylated Polyurethan	In vitro data	No significant irritation
Silane treated Silica	Rabbit	No significant irritation

Sensitization:

Skin Sensitisation

Name	Species	Value
Dimethacrylate (BISMA6)	Multiple animal species	Not classified
Methacrylated Polyurethan	Mouse	Not classified
Silane treated Silica	Guinea pig	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
Dimethacrylate (BISMA6)	In Vitro	Not mutagenic
Methacrylated Polyurethan	In Vitro	Not mutagenic
Silane treated Silica	In Vitro	Not mutagenic

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

Name	Route	Value	Species	Test result	Exposure Duration
Dimethacrylate (BISEMA6)	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	premating into lactation
Dimethacrylate (BISEMA6)	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	28 days
Dimethacrylate (BISEMA6)	Ingestion	Not classified for development	Rat	NOAEL 1,000 mg/kg/day	during gestation
Silane treated Silica	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Silane treated Silica	Ingestion	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation

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
Dimethacrylate (BISEMA6)	Ingestion	hematopoietic system liver immune system kidney and/or bladder endocrine system eyes	Not classified	Rat	NOAEL 1,000 mg/kg/day	13 weeks
Silane treated Silica	Inhalation	respiratory system	May cause damage to organs though prolonged or repeated exposure	Rat	LOAEL 0.035 mg/l	13 weeks
Silane treated Silica	Inhalation	hematopoietic system kidney and/or bladder	Not classified	Rat	NOAEL 0.035 mg/l	13 weeks
Silane treated Silica	Ingestion	liver	Not classified	Rat	NOAEL 1,000 mg/kg/day	5 weeks

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
Dimethacrylate (BISEMA6)	41637-38-1	Green algae	Analogous Compound	72 hours	No tox obs at lmt of water sol	>100 mg/l
Dimethacrylate (BISEMA6)	41637-38-1	Rainbow trout	Analogous Compound	96 hours	No tox obs at lmt of water sol	>100 mg/l
Dimethacrylate (BISEMA6)	41637-38-1	Water flea	Experimental	48 hours	No tox obs at lmt of water sol	>100 mg/l
Dimethacrylate (BISEMA6)	41637-38-1	Green algae	Analogous Compound	72 hours	No tox obs at lmt of water sol	100 mg/l
Dimethacrylate (BISEMA6)	41637-38-1	Water flea	Analogous Compound	21 days	No tox obs at lmt of water sol	100 mg/l
Dimethacrylate (BISEMA6)	41637-38-1	Zebra Fish	Analogous Compound	34 days	No tox obs at lmt of water sol	100 mg/l
Dimethacrylate (BISEMA6)	41637-38-1	Activated sludge	Experimental	3 hours	EC50	>1,000 mg/l
Methacrylated Polyurethan	1101874-33-2	Green algae	Endpoint not reached	72 hours	EC50	>100 mg/l
Methacrylated Polyurethan	1101874-33-2	Water flea	Experimental	48 hours	EC50	>100 mg/l
Silane treated Silica	68909-20-6	Algae or other aquatic plants	Estimated	72 hours	EC50	>100 mg/l

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Dimethacrylate (BISEMA6)	41637-38-1	Experimental Biodegradation	28 days	BOD	24 %BOD/ThOD	OECD 301D - Closed bottle test
Methacrylated Polyurethan	1101874-33-2	Experimental Biodegradation	28 days	BOD	6 %BOD/ThOD	OECD 301F - Manometric respirometry
Silane treated Silica	68909-20-6	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
Dimethacrylate (BISEMA6)	41637-38-1	Modeled Bioconcentration		Bioaccumulation factor	7	Catalogic™
Dimethacrylate (BISEMA6)	41637-38-1	Experimental Bioconcentration		Log Kow	≥4.66	OECD 117 log Kow HPLC method
Methacrylated Polyurethan	1101874-33-2	Experimental Bioconcentration		Log Kow	7.28	
Silane treated Silica	68909-20-6	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 completely cured (or polymerised) material in a permitted industrial waste facility. As a disposal alternative, incinerate uncured product in a permitted waste incineration facility. If no other disposal options are available, waste product that has been completely cured or polymerised may be placed in a landfill properly designed for industrial waste.

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.

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:** 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 14: Packing group (IMO) information was added.
Company Telephone information was modified.
Section 1: Emergency telephone information was modified.
Section 1: Product name information was modified.
Section 2: Hazard - Other information was modified.
Label: GHS Classification information was modified.
Label: GHS Precautionary - Prevention information was added.
Label: GHS Target Organ Hazard Statement information was added.
Label: Graphic information was modified.
Label: Signal Word information was added.
Label: Symbol information was added.
Section 2: Ingredient table information was modified.
Section 04: First Aid - Symptoms and Effects (GHS) information was added.
Section 4: First aid for inhalation information information was modified.
Section 04: Information on toxicological effects information was deleted.
Section 5: Fire - Advice for fire fighters information information was modified.
Section 6: Accidental release clean-up information information was modified.
Section 6: Accidental release environmental information information was modified.
Section 6: Accidental release personal information information was modified.
Section 7: Precautions safe handling information information was modified.
Section 09: Color information was added.
Section 9: Density information information was modified.
Section 9: Flammability (solid, gas) information information was deleted.
Section 09: Flammability information information was added.
Section 9: Flash point information information was modified.
Section 09: Kinematic Viscosity information information was added.
Section 09: Odor information was added.
Sections 3 and 9: Odour, colour, grade information information was deleted.
Section 09: Particle Characteristics N/A information was added.
Section 09: Percent Volatile information was added.
Section 9: Property description for optional properties information was added.
Section 9: Property description for optional properties information was deleted.
Section 09: Vapor Density Value information was added.
Section 9: Vapour density value information was deleted.
Section 9: Viscosity information information was deleted.
Section 09: VOC Less H₂O & Exempt Solvents information was added.
Section 09: Volatile Organic Compounds information was added.
Section 11: Acute Toxicity table information was modified.
Section 11: Carcinogenicity Table information was deleted.
Section 11: Carcinogenicity text information was added.
Section 11: Germ Cell Mutagenicity Table information was modified.
Section 11: Health Effects - Inhalation information information was modified.
Section 11: Health Effects - Skin information information was modified.
Section 11: Prolonged or repeated exposure may cause standard phrases information was added.
Section 11: Reproductive 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 11: Skin Sensitization Table information was modified.
Section 11: Target Organs - Repeated 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.
Section 13: 13.1. Waste disposal note information was modified.
Section 13: Standard Phrase Category Waste GHS information was modified.

Section 14: Environmental hazards information was added.

Section 14: IMO Subsidiary Risk information was added.

Section 14: IMO transport hazard classes information was added.

Section 14: Proper Shipping Name (IMO) information was added.

Section 14: UN Number (IMO) information was added.

Section 15: Regulations - Inventories information was modified.

Section 16: NFPA hazard classification for health information was modified.

Section 16: UK disclaimer information was deleted.

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