



Safety Data Sheet

Copyright, 2022, 3M Company.

All rights reserved. Copying and/or downloading of this information for the purpose of properly utilizing 3M products is allowed provided that: (1) the information is copied in full with no changes unless prior written agreement is obtained from 3M, and (2) neither the copy nor the original is resold or otherwise distributed with the intention of earning a profit thereon.

Document Group:	24-9901-0	Version Number:	6.02
Issue Date:	04/26/22	Supersedes Date:	08/20/21

SECTION 1: Identification

1.1. Product identifier

Transbond™ Supreme Lv Low Viscosity Light Cure Adhesive (712-046)

Product Identification Numbers

ID Number	UPC	ID Number	UPC
70-0008-0713-4		70-0008-4089-5	
70-0009-1691-9			

7010370498, 7000001018, 7100158572

1.2. Recommended use and restrictions on use

Recommended use

Orthodontic use

1.3. Supplier's details

MANUFACTURER:	3M
DIVISION:	Oral Care Solutions Division
ADDRESS:	3M Center, St. Paul, MN 55144-1000, USA
Telephone:	1-888-3M HELPS (1-888-364-3577)

1.4. Emergency telephone number

1-800-364-3577 or (651) 737-6501 (24 hours)

SECTION 2: Hazard identification

This document has been prepared in accordance with the U.S. OSHA Hazard Communication Standard, which requires the inclusion of all known hazards of the product or ingredients regardless of the potential risk. The risks of the hazards communicated in this document may vary depending on the potential for exposure.

2.1. Hazard classification

Serious Eye Damage/Irritation: Category 2B.

Skin Sensitizer: Category 1.

Reproductive Toxicity: Category 1B.

2.2. Label elements

Signal word

Danger

Symbols

Exclamation mark | Health Hazard |

Pictograms**Hazard Statements**

Causes eye irritation.
 May cause an allergic skin reaction.
 May damage fertility or the unborn child.

Precautionary Statements**Prevention:**

Obtain special instructions before use.
 Do not handle until all safety precautions have been read and understood.
 Wear protective gloves.
 Wash thoroughly after handling.
 Contaminated work clothing must not be allowed out of the workplace.

Response:

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 If eye irritation persists: Get medical advice/attention.
 IF ON SKIN: Wash with plenty of soap and water.
 If skin irritation or rash occurs: Get medical advice/attention.
 Wash contaminated clothing before reuse.
 IF exposed or concerned: Get medical advice/attention.

Disposal:

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

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
Silane Treated Ceramic	444758-98-9	50 - 60 Trade Secret *
Triethylene Glycol Dimethacrylate (TEGDMA)	109-16-0	10 - 20 Trade Secret *
Bisphenol A Diglycidyl Ether Dimethacrylate (BISGMA)	1565-94-2	10 - 15 Trade Secret *
Silane Treated Zirconia	None	1 - 10 Trade Secret *
Bisphenol A Polyethylene Glycol Diether Dimethacrylate (BISEMA-6)	41637-38-1	1 - 5 Trade Secret *
Silane Treated Silica	248596-91-0	<= 5 Trade Secret *
Reacted Polycaprolactone Polymer	None	< 5 Trade Secret *
Diphenyliodonium Hexafluorophosphate	58109-40-3	< 0.5 Trade Secret *
N,N-DIMETHYLBENZOCAINE	10287-53-3	< 0.3 Trade Secret *

*The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:

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

Skin Contact:

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

Eye Contact:

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

If Swallowed:

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

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

Allergic skin reaction (redness, swelling, blistering, and itching).

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

Condition

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. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

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

applicable local/regional/national/international regulations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

A no-touch technique is recommended. If skin contact occurs, wash skin with soap and water. Acrylates may penetrate commonly-used gloves. If product contacts glove, remove and discard glove, wash hands immediately with soap and water and then re-glove. Do not handle until all safety precautions have been read and understood. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Do not get in eyes. Use personal protective equipment (gloves, respirators, etc.) as required.

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 SDS.

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

Appearance

Physical state

Solid Paste

Color

Tooth

Specific Physical Form:

Paste

Odor

Slight Acrylate

Odor threshold

No Data Available

pH

No Data Available

Melting point

No Data Available

Boiling Point

Not Applicable

Flash Point	No flash point
Evaporation rate	No Data Available
Flammability (solid, gas)	Not Classified
Flammable Limits(LEL)	Not Applicable
Flammable Limits(UEL)	Not Applicable
Vapor Pressure	Not Applicable
Vapor Density	Not Applicable
Density	1.5 g/cm3 [Ref Std:WATER=1]
Specific Gravity	1.5 [Ref Std:WATER=1]
Solubility in Water	Nil
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	No Data Available
Molecular weight	No Data Available
Volatile Organic Compounds	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 polymerization 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 labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

This document has been prepared in accordance with the U.S. OSHA Hazard Communication Standard, which requires the inclusion of all known hazards of the product or ingredients regardless of the potential risk. The risks of the hazards communicated in this document may vary depending on the potential for exposure.

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 odor; however, no adverse health effects are anticipated.

Skin Contact:

Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness. Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

Eye Contact:

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

Ingestion:

May be harmful if swallowed.

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

May cause additional health effects (see below).

Additional Health Effects:

Reproductive/Developmental Toxicity:

Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

Toxicological Data

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

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE >5,000 mg/kg
Overall product	Ingestion		No data available; calculated ATE >2,000 - =5,000 mg/kg
Silane Treated Ceramic	Dermal		LD50 estimated to be > 5,000 mg/kg
Silane Treated Ceramic	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
Triethylene Glycol Dimethacrylate (TEGDMA)	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
Triethylene Glycol Dimethacrylate (TEGDMA)	Ingestion	Rat	LD50 10,837 mg/kg
Bisphenol A Diglycidyl Ether Dimethacrylate (BISGMA)	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
Bisphenol A Diglycidyl Ether Dimethacrylate (BISGMA)	Ingestion	Rat	LD50 > 11,700 mg/kg
Silane Treated Silica	Dermal		LD50 estimated to be > 5,000 mg/kg
Silane Treated Silica	Ingestion		LD50 estimated to be > 5,000 mg/kg
Silane Treated Zirconia	Dermal		LD50 estimated to be > 5,000 mg/kg
Silane Treated Zirconia	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
Bisphenol A Polyethylene Glycol Diether Dimethacrylate (BISEMA-6)	Dermal	Rat	LD50 > 2,000 mg/kg
Bisphenol A Polyethylene Glycol Diether Dimethacrylate (BISEMA-6)	Ingestion	Rat	LD50 > 35,000 mg/kg
Reacted Polycaprolactone Polymer	Dermal	Professional judgement	LD50 estimated to be 2,000 - 5,000 mg/kg

		nal judgeme nt	
Reacted Polycaprolactone Polymer	Ingestion	similar compoun ds	LD50 estimated to be 2,000 - 5,000 mg/kg
N,N-DIMETHYLBENZOCAINE	Dermal	Rat	LD50 > 2,000 mg/kg
N,N-DIMETHYLBENZOCAINE	Ingestion	Rat	LD50 > 2,000 mg/kg
Diphenyliodonium Hexafluorophosphate	Ingestion	Rat	LD50 32 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Silane Treated Ceramic	similar compoun ds	No significant irritation
Triethylene Glycol Dimethacrylate (TEGDMA)	Guinea pig	Mild irritant
Bisphenol A Diglycidyl Ether Dimethacrylate (BISGMA)	Rabbit	No significant irritation
Silane Treated Silica	Professio nal judgeme nt	No significant irritation
Silane Treated Zirconia	Rabbit	No significant irritation
Bisphenol A Polyethylene Glycol Diether Dimethacrylate (BISEMA-6)	Rabbit	Minimal irritation
N,N-DIMETHYLBENZOCAINE	Rabbit	No significant irritation
Diphenyliodonium Hexafluorophosphate	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Silane Treated Ceramic	similar compoun ds	Mild irritant
Triethylene Glycol Dimethacrylate (TEGDMA)	Professio nal judgeme nt	Moderate irritant
Bisphenol A Diglycidyl Ether Dimethacrylate (BISGMA)	In vitro data	No significant irritation
Silane Treated Silica	Professio nal judgeme nt	No significant irritation
Silane Treated Zirconia	Rabbit	Mild irritant
Bisphenol A Polyethylene Glycol Diether Dimethacrylate (BISEMA-6)	Rabbit	No significant irritation
N,N-DIMETHYLBENZOCAINE	Rabbit	No significant irritation
Diphenyliodonium Hexafluorophosphate	Rabbit	Mild irritant

Skin Sensitization

Name	Species	Value
Silane Treated Ceramic	similar compoun ds	Not classified
Triethylene Glycol Dimethacrylate (TEGDMA)	Human and animal	Sensitizing
Bisphenol A Diglycidyl Ether Dimethacrylate (BISGMA)	Mouse	Not classified
Bisphenol A Polyethylene Glycol Diether Dimethacrylate (BISEMA-6)	Guinea pig	Not classified
N,N-DIMETHYLBENZOCAINE		Not classified

Respiratory Sensitization

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

Germ Cell Mutagenicity

Name	Route	Value
Triethylene Glycol Dimethacrylate (TEGDMA)	In Vitro	Some positive data exist, but the data are not sufficient for classification
Bisphenol A Diglycidyl Ether Dimethacrylate (BISGMA)	In Vitro	Not mutagenic
Silane Treated Zirconia	In Vitro	Some positive data exist, but the data are not sufficient for classification
Bisphenol A Polyethylene Glycol Diether Dimethacrylate (BISEMA-6)	In Vitro	Not mutagenic
N,N-DIMETHYLBENZOCAINE	In vivo	Not mutagenic
N,N-DIMETHYLBENZOCAINE	In Vitro	Some positive data exist, but the data are not sufficient for classification
Diphenyliodonium Hexafluorophosphate	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Silane Treated Ceramic	Inhalation	similar compounds	Some positive data exist, but the data are not sufficient for classification
Triethylene Glycol Dimethacrylate (TEGDMA)	Dermal	Mouse	Not carcinogenic
Silane Treated Zirconia	Inhalation	Multiple animal species	Some positive data exist, but the data are not sufficient for classification

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
Triethylene Glycol Dimethacrylate (TEGDMA)	Ingestion	Not classified for female reproduction	Mouse	NOAEL 1 mg/kg/day	1 generation
Triethylene Glycol Dimethacrylate (TEGDMA)	Ingestion	Not classified for male reproduction	Mouse	NOAEL 1 mg/kg/day	1 generation
Triethylene Glycol Dimethacrylate (TEGDMA)	Ingestion	Not classified for development	Mouse	NOAEL 1 mg/kg/day	1 generation
Bisphenol A Diglycidyl Ether Dimethacrylate (BISGMA)	Ingestion	Not classified for development	Rat	NOAEL 1,000 mg/kg/day	during gestation
N,N-DIMETHYLBENZOCAINE	Ingestion	Not classified for female reproduction	Rat	NOAEL 600 mg/kg/day	prematuring into lactation
N,N-DIMETHYLBENZOCAINE	Ingestion	Not classified for development	Rat	NOAEL 50 mg/kg/day	prematuring into lactation
N,N-DIMETHYLBENZOCAINE	Ingestion	Toxic to male reproduction	Rat	NOAEL 50 mg/kg/day	53 days

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Diphenyliodonium Hexafluorophosphate	Inhalation	respiratory irritation	Not classified	Not available	Irritation Equivocal	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Silane Treated Ceramic	Inhalation	pulmonary fibrosis	Not classified	similar compounds	NOAEL Not available	
Triethylene Glycol Dimethacrylate	Dermal	kidney and/or bladder blood	Not classified	Mouse	NOAEL 833 mg/kg/day	78 weeks

(TEGDMA)						
Bisphenol A Diglycidyl Ether Dimethacrylate (BISGMA)	Ingestion	endocrine system hematopoietic system liver heart skin gastrointestinal tract bone, teeth, nails, and/or hair immune system muscles nervous system eyes kidney and/or bladder respiratory system vascular system	Not classified	Rat	NOAEL 1,000 mg/kg/day	90 days
Silane Treated Zirconia	Inhalation	pulmonary fibrosis	Not classified	Multiple animal species	NOAEL Not available	
Silane Treated Zirconia	Inhalation	respiratory system	Not classified	Human	NOAEL Not available	occupational exposure
N,N-DIMETHYLBENZOCAINE	Ingestion	hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 74 mg/kg/day	28 days
N,N-DIMETHYLBENZOCAINE	Ingestion	liver heart endocrine system gastrointestinal tract bone, teeth, nails, and/or hair immune system muscles nervous system eyes kidney and/or bladder respiratory system vascular system	Not classified	Rat	NOAEL 900 mg/kg/day	28 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**Ecotoxicological information**

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

Chemical fate information

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

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 polymerized) 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 polymerized may be placed in a landfill properly designed for industrial waste.

EPA Hazardous Waste Number (RCRA): Not regulated

SECTION 14: Transport Information

For Transport Information, please visit <http://3M.com/Transportinfo> or call 1-800-364-3577 or 651-737-6501.

SECTION 15: Regulatory information

15.1. US Federal Regulations

Contact 3M for more information.

EPCRA 311/312 Hazard Classifications:

Physical Hazards

Not applicable

Health Hazards

Reproductive toxicity

Respiratory or Skin Sensitization

Serious eye damage or eye irritation

Additional TSCA Information

Components	CAS No	Additional Information
Silane Treated Silica	248596-91-0	Allowed use(s): Coating additive.

15.2. State Regulations

Contact 3M for more information.

15.3. Chemical Inventories

This material contains one or more substances not listed on the TSCA Inventory. Commercial use of this material is regulated by the FDA.

Contact 3M for more information.

15.4. International Regulations

Contact 3M for more information.

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: Other information

NFPA Hazard Classification

Health: 2 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.

Document Group:	24-9901-0	Version Number:	6.02
Issue Date:	04/26/22	Supersedes Date:	08/20/21

DISCLAIMER: The information in this Safety Data Sheet (SDS) is believed to be correct as of the date issued. 3M MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's method of use or application. Given the variety of factors that can affect the use and application of a 3M product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for user's method of use or application.

3M provides information in electronic form as a service to its customers. Due to the remote possibility that electronic transfer may have resulted in errors, omissions or alterations in this information, 3M makes no representations as to its completeness or accuracy. In addition, information obtained from a database may not be as current as the information in the SDS available directly from 3M.

3M USA SDSs are available at www.3M.com