
SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name: R Bond - Light Curing Dentine/ Enamel Bonding Agent

INTENDED USE: Adhesive of the composite resin for direct restoration

Company Name: Rident Denpro Private Limited

Address: 40-41 vrandavan nagar boranada, jodhpur 342008 India

Tel: + 91-9414201171

Email: info@rident.in

Web: www.rident.in

Emergency Contact No:-+91-9414201171

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	C.A.S.No.	% by Wt
BISPHENOL A DIGLYCIDYL ETHER DIMETHACRYLATE (BISGMA)	1565-94-2	15 - 25
2-HYDROXYETHYL METHACRYLATE	868-77-9	15 - 25
ETHANOL	64-17-5	10 - 15
WATER	7732-18-5	10 - 15
PHOSPHORIC ACID-6-METHACRYLOXY-HEXYLESTERS	Mixture	5 - 15
SILANE TREATED SILICA	122334-95-6	8 - 12
1,6-HEXANEDIOL DIMETHACRYLATE	6606-59-3	5 - 10
COPOLYMER OF ACRYLIC AND ITACONIC ACID	25948-33-8	1 - 5
(DIMETHYLAMINO)ETHYL METHACRYLATE	2867-47-2	1 - 5
CAMPORQUINONE	10373-78-1	1 - 3
2,4,6-TRIMETHYLBENZOYLDIPHENYLPHOSPHINE OXIDE	75980-60-8	1 - 3

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Odor, Color, Grade: viscous, yellow liquid, characteristic odor

General Physical Form: Liquid

Immediate health, physical, and environmental hazards: May cause mild eye irritation. May cause allergic skin reaction. May cause target organ effects.

See Section 3.2 for other hazards that can be associated with the ingredients in this product in a non-emergency situation. This document has been prepared in accordance with the US OSHA Hazard Communication Standard, which requires the inclusion of all known hazards of the product or its ingredients regardless of the potential risk. The risks of the hazards communicated in this document may vary depending upon the potential for exposure. This product has been evaluated for biocompatibility and determined to be safe for its normal, intended use in patients.

POTENTIAL HEALTH EFFECTS

Eye Contact : Mild Eye Irritation: Signs/symptoms may include significant redness, swelling, pain, tearing, cloudy appearance of the cornea, and impaired vision.

Skin Contact : Moderate 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.

Inhalation : Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. May be absorbed following inhalation and cause target organ effects.

Ingestion : Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea. May be absorbed following ingestion and cause target organ effects.

Target Organ Effects: Exposures needed to cause the following health hazard(s) are not expected during normal intended use:
 Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, in coordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.
 Liver Effects: Signs/symptoms may include loss of appetite, weight loss, fatigue, weakness, abdominal tenderness and jaundice. Contains a chemical or chemicals which can cause birth defects or other reproductive harm.
 NOTE: This product contains ethanol. There are data associating human consumption of alcoholic beverages (ethanol) with developmental toxicity. This is not an expected effect during the foreseeable use of this product.

Carcinogenicity: Contains a chemical or chemicals which may cause cancer.
 NOTE: This product contains ethanol. In IARC published Monograph No. 44, entitled, "Alcohol Drinking", the carcinogenicity of ethanol was determined based on chronic exposure to ethanol through human consumption of alcoholic beverages. This is not an expected effect during the foreseeable use of this product.

Ingredient C.A.S. No. Class Description Regulation
 ETHANOL 64-17-5 Group 1 International Agency for Research on Cancer

SECTION 4: FIRST AID MEASURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

EyeContact : Immediately flush eyes with large amounts of water for at least 15 minutes. Get immediate medical attention.

SkinContact : Remove contaminated clothing and shoes. Immediately flush skin with large amounts of water. Get medical attention. Wash contaminated clothing and clean shoes before reuse.

Inhalation : Remove person to fresh air. If signs/symptoms develop, get medical attention.

If Swallowed : Do not induce vomiting unless instructed to do so by medical personnel. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get medical attention.

SECTION 5: FIRE-FIGHTING MEASURES

FLAMMABLE PROPERTIES

Auto ignition temperature	:	<i>No Data Available</i>
FlashPoint	:	34 °C [<i>Test Method: Closed Cup</i>]
Flammable Limits- LEL	:	<i>No Data Available</i>
Flammable Limits- UEL	:	<i>No Data Available</i>
EXTINGUISHING MEDIA	:	Use fire extinguishers with class B extinguishing agents (e.g., dry chemical, carbon dioxide).

PROTECTION OF FIRE FIGHTERS

Special Fire Fighting Procedures	:	Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture. Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).
Unusual Fire and Explosion Hazards:	:	Closed containers exposed to heat from fire may build pressure.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Accidental Release Measures: Refer to other sections of this MSDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment. Call Rident Denpro for more information on handling and managing the spill. Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel. Remove all ignition sources such as flames, smoking materials, and electrical spark sources. Use only non-sparking tools. 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. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. Contain spill. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water. Cover spill area with a fire- extinguishing foam. An aqueous film forming foam (AFFF) is recommended. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a toxic, corrosively or

flammability hazard. Collect as much of the spilled material as possible using non-sparking tools. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and MSDS. Collect the resulting residue containing solution. 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. Cover, but do not seal for 48 hours. Dispose of collected material as soon as possible.

SECTION 7: HANDLING AND STORAGE

- HANDLING** : Keep away from heat, sparks, open flame, pilot lights and other sources of ignition. Avoid static discharge. 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. Avoid eye contact. Avoid breathing of vapors. Avoid skin contact. Wash hands after handling and before eating.
- STORAGE** : Store away from heat. Store out of direct sunlight. Keep container tightly closed.

SECTION 8: EXPOSURE CONTROLS /PERSONAL PROTECTION

ENGINEERINGCONTROLS: Use in a well-ventilated area.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

- Eye/Face Protection** : Avoid eye contact. The following eye protection(s)are recommended: Safety Glasses with side shields.
- Skin Protection** : Avoid skin contact. See Section 7.1 for more information on skin protection.
- Respiratory Protection** : Under normal use conditions, airborne exposures are not expected to be significant enough to require respiratory protection.
- Prevention of Swallowing** : Do not ingest. Wash hands after handling and before eating.

EXPOSURE GUIDELINES

Ingredient Authority Type Limit Additional Information

ETHANOL ACGIH TWA 1000 ppm TableA4

ETHANOL OSHA TWA 1000 ppm Table Z-1

SOURCE OF EXPOSURE LIMITDATA:

ACGIH: American Conference of Governmental Industrial Hygienists CMRG:

Chemical Manufacturer Recommended Guideline

OSHA: Occupational Safety and Health Administration

AIHA: American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Odor,Color,Grade	:	Viscous, yellow liquid, characteristic odor
General Physical Form	:	Liquid
Autoignition temperature	:	No Data Available
Flash Point	:	34 °C [Test Method: ClosedCup]
Flammable Limits- LEL	:	No Data Available
Flammable Limits- UEL	:	No Data Available
Boiling point	:	>= 78 °C
Density	:	1 - 1.2g/cm3
Vapor Density	:	No Data Available
Vapor Pressure	:	<= 15mmHg
Specific Gravity	:	1 - 1.2 [Ref Std:WATER=1]
pH	:	Not Applicable
Melting point	:	No Data Available
Solubility in Water	:	Appreciable

SECTION 10: STABILITY AND REACTIVITY

Stability	:	Stable
Materials and Conditions to Avoid	:	Heat
Hazardous Polymerization	:	Hazardous polymerization will not occur
Hazardous Decomposition or By-Products <u>Substance</u>		
		<u>Condition</u>
Carbon monoxide		During Combustion
Carbon dioxide		During Combustion
Irritant Vapors or Gases		During Combustion

SECTION 11: TOXICOLOGICAL INFORMATION

Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICOLOGICALINFORMATION	:	Not determined.
CHEMICALFATEINFORMATION	:	Not determined.

SECTION 13: DISPOSALCONSIDERATIONS

WasteDisposalMethod	:	Incinerate in a permitted hazardous waste incinerator.As a disposal alternative, dispose of waste product in a
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EPA Hazardous Waste Number(RCRA): permitted hazardous waste facility.
D001(Ignitable)

SECTION 14: TRANSPORT INFORMATION

ID Number(s) : 70-2011-3181-3, 70-2011-3182-1, 70-2011-3245-6

SECTION 15: REGULATORY INFORMATION

US FEDERAL REGULATIONS : Contact Rident Denpro for more information.
311/312 Hazard Categories : No Fire Hazard—No Pressure Hazard-No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard – Yes

STATE REGULATIONS : Contact Rident Denpro for more information.
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 Rident Denpro for more information.

INTERNATIONAL REGULATIONS : Contact Rident Denpro for more information.

SECTION 16: OTHER INFORMATION

NFPA Hazard Classification

Health: 2 Flammability: 0 Reactivity: 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 Changes:

Copyright was modified.

Section 3: Other health effects information was modified. Section 3:

Immediate other hazard(s) comment was added. Section 14: ID Number Heading Template 1 was added.

Section 14: ID Number(s) Template 1 was added. Section 2: Ingredient table was added.

Section 8: Exposure guidelines ingredient information was added. Section 8:

Exposure guidelines data source legend was added.

Section 3: Carcinogenicity table was added. Section 3:

Carcinogenicity heading was added.