MATERIAL SAFETY DATA SHEET: C-R® HYBRID COMPOSITE RESIN

Several materials used in our manufacturing process may be subject to Right-To-Know Laws in your state. The following is a list of those materials and the products in which they are used. Other materials in our manufacturing are not applicable to the law.

Section I: Manufacturer: CENTRIX, INCORPORATED 770 River Road Shelton, CT 06484-5458 USA (203) 929-5582 Product Number: 310071
Section II: Identification: Chemical name: Bisphenol A Diglycidyl Methacrylate, Triethylene Glycol Dimethacrylate. Trade names or synonyms: Centrix C-R® HYBRID Core Paste
Chemical Family: Formula:$C_{29}H_{36}O_9$, $(H_2C{=}CH_3)CO_2CH_2CH_2OCH_2{-})_2$
Section III: Hazardous Ingredients: Bisphenol Diglycidyl Methacrylate, Triethylene Glycol Methacrylate TLV NOT AVAILABLE.
Section IV: Physical Data: Boiling point(°F): Vapor Pressure(mm Hg): Vapor Density(AIR=1): Solubility in Water: Specific Gravity: Percentage Volatile By Volume: Evaporation Rate: Base Appearance and Odor: Tan Paste with Resin Odor. Catalyst: White with Resin Odor.
Section V: Fire and explosion Data: Fire and Explosion Hazard Summary:Flash Point 240°F Extinguishing Media: foam, carbon dioxide or dry chemical. Unusual Fire and Explosion Hazards: None Health Hazard Summary: Skin,Effects of OverExposure:May Cause Irritation. Skin, First Aid Procedures: Wash with soap and water. If irritation persists, get medical attention. Eyes, Effects of Overexposure: May cause irritation. Flush promptly with large amount of water for 15 minutes and get medical attention. Inhalation , Effects of Overexposure: A very large amount of uncured material can cause dyspepsia, nausea, vertigo Ingestion, First Aid Procedures: Consult a physician promptly.
Section VI: Reactivity Data: Stable. Conditions to Avoid: Storage away from light, open flames, contamination and prolonged storage above 35°C. Incompatibility: Strong acid, peroxides, and other oxidizing agent. Hazardous Decomposition Products: Carbon monoxide and dioxide, low molecular wight hydrocarbons and organic acids. Hazardous polymerization will occur. Conditions to avoid: Light, open flames, contamination, and prolonged storage above 35°C (100° F)
Section VII: Spill or Leak Procedures: Steps to be taken in case material is released or spilled: Absorb with inert materials such as dry sand and place in closed container for disposal as solid waste. Waste Disposal Method: This disposal method is a recommendation only. Be sure to dispose of materials in full accordance with all local, state, and federal regulations applicable.
Section VIII: Special Protection Information: Respiratory Protection: Ventilation: Protective Gloves: Eye Protection: Other Protective Equipment: Not required under normal condition of use.
Section IX: Special Precautions: Precautions to be taken in handling and storing: Always keep containers closed. Store in a cool, dry area.
Other Precautions: We recommend obtaining a copy of the "Director of Poison Control Centers." To obtain a copy, write: Superintendent of Documents, U.S. Government Printing Office, Washington D.C.

The information contained herein is believed to be accurate and is offered in good faith for the user's consideration and investigation. No warranty either expressed or implied is made for the completeness or accuracy of this information whether originating from Centrix Inc. or not. Users of this material should satisfy themselves by independent investigation of current scientific and medical knowledge that the material can be used safely.

INSTRUCTIONS FOR USE

C-R® HYBRID

TYPE II COMPOSITE RESIN

GENERAL INFORMATION:

C-R®HYBRID is a self-curing Bis-GMA composite restorative with a hybrid filler load of quartz, barium and silicon dioxide filler particles. It is radiopaque and fully compatible with all composite bonding agents.

USES:

As a Class III and V composite restorative and for limited use in Class I and II restorations in premolars. Also, for use in selected Class IV restorations where esthetics is of primary importance.

C-R®HYBRID may be used as a self-cure composite base for use under light-cure restoratives to minimize shrinkage.

C-R®HYBRID may be used as a natural-color core buildup material for use under all porcelain crowns.

SPECIFICATIONS:

Filler load: 78-80%, comprising of 40% 44-micron quartz, 6% 5-micron quartz, 6% treated silica under 5-micron, and 30% barium glass in the range of 2 to 40-microns.
Color: Universal (approx Vita 3.5)
Radiopaque: Yes
Diametral tensile strength: 45 MPa
Compressive strength: 221 MPa
Modulus of elasticity in compression: 22 GPa
Transverse strength: 90 GPa
Transverse modulus: 11.1 GPa

PRECAUTIONS:

Do not store or use in presence of eugenol or eugenol-based materials. A calcium hydroxide or glass ionomer liner maybe placed to isolate from eugenol sources.

Standard mix **C-R®HYBRID** is too viscous to syringe through a **CENTRIX NeedleTube™**. When using NeedleTubes, thin out with a drop of **C-R®FLOW** composite thinner (Product 310072) when mixing.

If refrigerated, allow to return to room temperature before attempting to syringe.

PROCEDURE:

1). Follow usual procedure for composite restoration. Any Bis-GMA compatible bonding system may be used.
2). Using opposite ends of the disposable spatula, mix equal amounts of BASE and CATALYST pastes on a mixing pad.

Note: a). For a slower set, use a greater percentage of CATALYST paste
b). To syringe through a NeedleTube, add a drop of C-R®FLOW composite thinner to the mix (Product 370072)

Mix with firm pressure for 20 seconds, until material blends into a uniform color. Jars should be tightly capped after use.
3). Back-load into a disposable **CENTRIX** tube and plug cartridge. **AccuDose®** tube and plug styles are recommended. Do not fill cartridge more the 1/2 full; tube failure may result. Seal with plug, and insert into **CENTRIX** syringe handle.
4). Inject **C-R®HYBRID** into the preparation from the bottom up. Use a slow, steady pressure, allowing the composite to rise around the tip as you slowly withdraw. For a faster flow of material, cut the tip back or use the AccuDose®High-Viscosity style tube.
5). Since **C-R®HYBRID** is a self-cure, contact with the warmed tooth surface and bonding agent will begin to accelerate the set. **C-R®HYBRID** will begin to set hard in about 2 minutes after start of syringe injection. Check the set before removing the matrix band and proceeding with finishing. For matched Vita colors, a layer of light-cure composite may be placed over **C-R®HYBRID**. An intermediate layer of bonding agent is recommended.
6). **C-R®HYBRID** may be finished with a combination of diamonds, stones, or burs. Final polish can be attained using yellow and grey **MIN-IDENTOFLEX®** cups and points.

STORAGE:

Do not expose to temperatures exceeding 75° F (24° C).
Do not store in presence of eugenol.
Do not freeze. If refrigerated, allow to return to room temperature before use.
Do not expose to direct sunlight.
Shelf life is 24 months from date of manufacture.

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