

EpoPro 8704A/D

Thermally Conductivity, Shock Resistant Epoxy System

EpoPro 8704A/D is an epoxy potting system with an excellent balance of thermal conductivity and mechanical properties including excellent thermal cycling and thermal shock resistance. It is an easy to use system available in black and many custom colors and can be used for large or small potting and casting applications. EpoPro 8704A/D adheres well to metal, glass and many plastics and provides excellent moisture, chemical and environmental resistance.

TYPICAL APPLICATIONS

- Transformers
- Relays
- Automotive Modules

HANDLING PROPERTIES

	<u>VALUE</u>	<u>TEST METHOD</u>
Density Mixed, g/cm ³	2.00	ASTM E-201
Viscosity Mixed @ 25°C, cps	8,100	ASTM D-2393
Mix Ratio By Weight	100A:10D	Calculated
Mix Ratio By Volume	100A:25D	Calculated
Gel Time @ 25°C, 100g mass	65 minutes	ASTM D-2471
Recommended Cure Schedules:	24 hours at room temperature or 4 hours at 65C or 2 hours at 80C	

PHYSICAL PROPERTIES

	<u>VALUE</u>	<u>TEST METHOD</u>
Color	Black	Visual
Shore D Hardness	88D	ASTM D-2240
Tensile Strength, psi	10,000	ASTM D-638
Tensile Elongation at break	2.2%	ASTM D-638
Flexural Strength, psi	15,200	ASTM D-638
Compressive Strength, psi	18,000	ASTM D-695
Glass Transition Temperature	72°C	ASTM E-381
Coefficient of Thermal Expansion	47 ppm/°C	ASTM E-381
Shrinkage, in/in	0.002	ASTM D-2566
Thermal Conductivity, W/mK	1.1	ASTM D-2214
Water Absorption, 24 hr. immersion	0.05%	

ELECTRICAL PROPERTIES

	<u>VALUE</u>	<u>TEST METHOD</u>
Volume Resistivity @ 25°C, ohm-cm	8.0 x 10 ¹⁵	ASTM D-257
Dielectric Constant @ 25°C, 1 KHz	4.6	ASTM D-150
Dissipation Factor @ 25°C, 1 KHz	0.006	ASTM D-150
Dielectric Strength, volts/mil	≥ 480	ASTM D-149

NOTE : Typical Properties determined using EpoPro 8704A/D gelled at room temperature and then cured for 2 hours @ 80°C. Values are based on laboratory or average production results – not for specification purposes.

SUGGESTED PROCESSING GUIDELINES:

EpoPro 8704A/D can be manually applied by knife, spatula, injection, dipping or pouring. It is suitable for meter-mix dispensing and can be supplied in premixed and frozen syringes for small volume applications. For meter-mix applications the 8704A is considered to contain an abrasive filler and so should be used with abrasion resistant equipment and with periodic agitation to prevent filler sedimentation.

Before each use, stir the containers of EpoPro 8704A to ensure that all of the mineral fillers are thoroughly dispersed and have not settled or separated during storage or transportation. When ready, weigh Part A and Part B in the recommended ratio as accurately as possible into a clean mixing container. Always use weighing equipment having accuracy in proportion to the amounts being weighted. Blend by using a spatula or stirring stick for at least 2 minutes using a kneading motion. Scrape the bottom and sides of the mixing container carefully and frequently to produce a uniform mixture.

Vacuum degassing the material before or after application is helpful to ensure the best electrical and mechanical performance.

STORAGE GUIDELINES:

Store this material in a clean, cool and dry environment in its tightly closed original container. EpoPro 8704A may settle during storage and should be thoroughly re-mixed prior to use. Tightly re-seal after use. If the recommended storage conditions are observed the products will have a minimum shelf-life of 12 months from the date of shipment.

HANDLING PRECAUTIONS:

Mandatory and recommended industrial hygiene procedures should be followed whenever these products are being handled and processed. For additional information please consult the corresponding material safety data sheets.

PERSONAL HYGIENE:

EpoPro 8704A

CAUTION! May cause eye irritation. Prolonged or repeated skin contact may cause irritation, may cause allergic skin reaction. Harmful if inhaled or swallowed. Avoid contact with eyes, skin, or clothing. Wear eye protection and impervious gloves when handling. Wash thoroughly after handling. Avoid breathing vapor or mist. Keep containers closed when not in use. Use only with adequate ventilation. Do not take internally.

EpoPro 8704B

WARNING! May causes skin and eye irritation. May cause allergic skin and respiratory reactions. Harmful if inhaled or swallowed. Do NOT get in eyes, on skin, or clothing. Wear chemical splash goggles and impervious gloves when handling. Wash skin and clothing thoroughly after handling. Avoid breathing vapor or mist. Use only with adequate ventilation. Keep containers closed when not in use. Do NOT take internally.

FIRST AID

In case of contact:

Skin – Immediately wash skin thoroughly with mild soap and water. Remove contaminated clothing and wash before reuse. Destroy contaminated shoes and other articles made of leather.

Eyes – Immediately flush eyes with plenty of water for 15 minutes and get prompt medical attention.

Inhalation - Remove person to fresh air. Administer oxygen or artificial respiration if necessary. Call a physician.

Ingestion - Do not induce vomiting. Dilute with plenty of water and contact physician immediately. Never give anything by mouth to an unconscious person.

DISCLAIMER:

IMPORTANT: The following supersedes Buyer's documents. **SELLER / MANUFACTURER MAKES NO REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, INCLUDING OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.** No statements herein are to be construed as inducements to infringe any relevant patent. Under no circumstances shall Seller / Manufacturer be liable for incidental, consequential or indirect damages for alleged negligence, breach of warranty, strict liability, tort or contract arising in connection with the product(s). Buyer's sole remedy and Seller's sole liability for any claims shall be Buyer's purchase price. Data and results presented are based on controlled or laboratory work and must be confirmed by Buyer by testing for its intended conditions of use. The product(s) has not been tested for, and is therefore not recommended for, uses for which prolonged contact with mucous membranes, abraded skin, or blood is intended; or for uses for which implantation within the human body is intended

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