Product Datasheet

EpoPro® EP 1200 / 8704B5

LOW VISCOSITY CASTING, COATING & ENCAPSULATING SYSTEM

EP 1200 / 8704B5 resin is an undiluted, low viscosity epoxy system used for casting, coating, encapsulating & bonding. The cured polymer is very resistant to thermal shock and impact and is crack resistant. This system is excellent to use as a binder with sand and mineral fillers and can be supplied filled with a number of different fillers to provide properties such as flame retardance, thermal conductivity, and exceptional dielectric performance.

This system is available in many colors and the work-life can be adjusted from 5 minutes to 70 minutes if desired. Please contact us to discuss your application if you think such a variant would be helpful for your application.

APPLICATIONS & BENEFITS:

- Adhesive resin with good adhesion to a wide range of materials
- Electrical Encapsulation
- Protective coating for metals, concrete, etc.
- Tooling and Casting Materials

HANDLING PROPERTIES	VALUE	TEST METHOD
EpoPro EP 1200		
Visual Appearance	Clear to light yellow liquid	
Density,	1.15 g/cm³	ASTM E-201
Viscosity at 25ºC	9,500 – 14,000 cps	ASTM D-2393
EpoPro 8704B5		
Visual Appearance	Clear to light yellow liquid	
Density,	1.00 g/cm³	ASTM E-201
Viscosity at 25ºC	10 – 40 cps	ASTM D-2393
Mix Ratio By Weight	100A:30B	Calculated
Mix Ratio By Volume	100A:33B	Calculated
Gel Time at 25ºC, 100g mass	30 minutes	ASTM D-2471
Gel Time at 25ºC, 1/16” thick film	50-70 minutes	ASTM D-2471

Recommended Cure Schedule: Functional cures are achieved in 24 hours at room temperature, but full strength may take 2-3 days to develop. Alternately the system can be heat cured for 3-4 hours at 65ºC. To minimize curing shrinkage allow to gel at room temperature for at least 2 hours before heat curing.

PHYSICAL PROPERTIES	VALUE	TEST METHOD
Color	Clear light yellow to amber	Visual
Density, g/cm³	1.08	ASTM E-201
Shore Hardness	75D	ASTM D-2240

Tensile Strength	7000 psi	ASTM D-638
Tensile Elongation at break	4 -7%	ASTM D-638
Flexural Strength	13,200	ASTM D790-86
Flexural Modulus	400,000	ASTM D790-86
Water Absorption, % by weight		
After 24 hours at 25ºC	0.25%	ASTM D-638
Glass Transition Temp. (Tg)	49ºC	by DSC
Coefficient of Thermal Expansion		
Alpha 1 (below Tg)	54 ppm/ ºC	DIN 53 752
Alpha 2 (above Tg)	105 ppm/ ºC	
Thermal Conductivity	0. 18 W/mK	DIN 52 612

ELECTRICAL PROPERTIES

	VALUE		TEST METHOD
Tracking Resistance	CTI > 600		IEC 112
Dielectric Strength			ASTM D-149
10 mil thickness, V/mil	≥ 1500		
	23°C	80°C	
Volume Resistivity, ohm-cm	$4x10^{14}$	$5 x10^{12}$	ASTM D-257
Dielectric Constant, at 100Hz	4.9	5.6	ASTM D-150
Dissipitation Factor at 100Hz	0.007	0.028	ASTM D-150
Dielectric Constant, at 100 kHz	4.57	4.92	ASTM D-150
Dissipitation Factor @ 60Hz	0.048	0.027	ASTM D-150

NOTE : Typical Properties determined using EpoPro 1200/ 8704B5 cured for 2 hours at 25ºC + 4 hours at 65ºC. Values are based on laboratory or average production results – not for specification purposes.

SUGGESTED PROCESSING GUIDELINES:

To use, weigh Part A and Part B in the recommended ratio as accurately as possible into a clean mixing container. Mixing containers should preferably be made of polypropylene, polyethylene, glass, or non-corroding metal. (Stainless steel, aluminum, etc.). Always use weighing equipment having accuracy that is ±1% or less of the smallest quantity that you will be weighing. Blend Part A & B thoroughly by using a spatula or stirring stick for at least 2-3 minutes using a kneading motion. Scrape the bottom and sides of the mixing container carefully and frequently to produce a uniform mixture. Vacuum de-gassing after mixing may be helpful

STORAGE GUIDELINES:

Store this material in a clean, cool and dry environment in its tightly closed original container. Crystallization may occur if the EP1200 is exposed to freezing temperatures or cold temperatures for extended periods. If this occurs, heat the entire container of EP1200 for 4 hours at 50ºC - 60ºC to re-liquefy the crystals. Allow to cool to ambient temperature prior to using. 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.

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:

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