Product Datasheet

EpoPro® 212A/Hardener 9617

Unfilled, Low Viscosity Epoxy Adhesive and Impregnating System

EpoPro® 212A/Hardener 9617 is a two part epoxy system that cures at room temperature or with heat into a tough, semi-flexible polymer. The cured system provides excellent mechanical and electrical properties and is resistant to impact, thermal shock, moisture and many chemicals. EpoPro® 212A/Hardener 9617 is an excellent adhesive providing for most materials including metals, wood, rubber, glass, and many plastics. It is low in viscosity and penetrates into wood, cloth, coil windings, and other porous materials and tight spaces. This system has a long pot-life and generates little heat during curing as compared to other room temperature curing epoxy systems.

The EpoPro 212A/Hardener 9617 system can be supplied in custom colors and many of its properties can be modified to suit your application or production process. Please contact us to discuss your application if you would like to receive samples of a custom color or to discuss the development of a custom variant that would be suitable for your application.

SUGGESTED APPLICATIONS:

- Laminating and bonding of porous materials
- Impregnating wire wound devices

HANDLING PROPERTIES	VALUE	TEST METHOD
EpoPro 212A		
Visual Appearance	Clear, light yellow	
Density, Part A	1.15 g/cm³	ASTM E-201
Viscosity, Part A at 25ºC	600 cps	ASTM D-2393
Flash Point	78°C	ASTM D-92
Hardener 9617		
Visual Appearance	Amber Liquid	
Density,	0.97 g/cm³	ASTM E-201
Viscosity, Part B at 25ºC	9,000 cps	ASTM D-2393
Flash Point	>93°C	ASTM D-92
Mix Ratio (part by weight)	100A : 67B*	
Mix Ratio (part by volume)	100A : 80B*	
Viscosity Mixed at 25ºC	2,000 cps	ASTM D-2393
Viscosity Mixed at 65ºC	300 cps	ASTM D-2393
Pot life (100 grams) at 25ºC	180 minutes	

Cure Schedules: 24-48 hours at 25ºC **or** 4 hours at 65ºC **or** 2-3 hours at 80ºC **or** 1 hour at 95ºC. Allowing the material to gel at room temperature prior to heat curing will reduce shrinkage and may increase bond strength.

* Mix ratios can be varied somewhat from the suggested ranges without major effects on cured properties. Please contact us for assistance if you are considering or using an alternate mix ratio.

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PHYSICAL PROPERTIES (Tested at 25C unless otherwise noted – cured 7 days @ 25C)		TEST METHOD
Appearance	Clear to light yellow	Visual
Hardness, Shore D At 25°C	85D	ASTM D-2240
Tensile Strength	8,300 psi	ASTM D-638
Tensile Elongation	2.0%	ASTM D-638
Flexural Strength	10,000 psi	
Compressive Yield Strength	18,000	
Moisture absorption (2 hours in boiling water - % weight gain)	0.65%	ASTM D-570
Thermal Conductivity	0.21 W/mK	ASTM D-2214
Thermal Rating	-55ºC to 105ºC	EIC 216
Weight loss after 48 hours at 204C	0.65%	
Volume Resistivity (ohm-cm) @ 25ºC	1.0×10^{15}	Mil-I-46058C
Dielectric Constant at 25C at 1 KHz / at 1 MHz	3.1 / 3.0	ASTM D-150
Dissipation Factor at 25C at 1 KHz / at 1 MHz	0.013 / 0.016	ASTM D-150

NOTE : Values are based on laboratory or average production results – not for specification purposes.

PROCESSING AND APPLICATION INSTRUCTIONS :

To use, weigh Part A and Part B in the ratio you have selected 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 for best electrical and physical properties.

Apply to clean, dry surfaces. For best adhesion, abrade the surface with a wire brush, scouring pad, steel wool or coarse sandpaper. After abrasion, clean the surface of any loose material and degrease with solvent or detergent to remove any contaminants. The material may then be applied with any suitable application method including brushes, spatulas, trowels, etc.

STORAGE GUIDELINES:

Store these materials in a clean, cool and dry environment in their tightly closed original containers. Protect from extended exposure to temperatures below 15ºC (59ºF). Crystallization may occur if the material is exposed to cold for extended periods. If this occurs, heat the entire container for 4 hours at 70ºC to re-liquefy the material. Allow to cool to ambient temperature prior to using. Also protect from exposure to moisture or high humidity. Tightly re-seal containers 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 212A

WARNING! COMBUSTIBLE. Causes severe eye irritation. Causes skin irritation and possible allergic reaction. Harmful if inhaled. Harmful if swallowed. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated contact with skin. Wash thoroughly after handling

Hardener 9617

WARNING! Causes severe eye irritation and possible eye damage. Causes severe skin irritation and possible allergic skin reaction. Do NOT get in eyes, on skin, or clothing. Avoid breathing vapor or mist. Use only with adequate ventilation. Keep containers closed when not in use. Do NOT take internally. Harmful if inhaled. Harmful if swallowed. Wash thoroughly after handling

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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