Product Datasheet

SP&S Specialty Polymers and Services

EpoPro® 262A/B

EPOXY POTTING SYSTEM – IMPACT AND THERMAL SHOCK RESISTANT

EpoPro® 262A/B is a two part, filled epoxy system that cures with heat into a tough, machinable polymer with very good environmental and chemical resistance. The system demonstrates excellent adhesion to most materials including metals, glass, and many plastics. EpoPro® 262A/B is especially good at resisting cracking caused by thermal shock and impact. It is designed to provide excellent impregnation of wound coils and is relatively easy to vacuum degas and dispense.

The EpoPro 262A/B system is available in many standard and custom colors and the viscosity and flow properties can be factory adjusted to suit your application process. Please contact us to discuss your application if you'd 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:

- Ignition coils for cars, motorcycles, power tools, etc.
- Other potting application where good impregnation of coils or thermal shock resitance is desired.

HANDLING PROPERTIES	VALUE	TEST METHOD
EpoPro 262A (resin)		
Visual Appearance	Off-white liquid	
Density, Part A	1.6 g/cm³	ASTM E-201
Viscosity, Part A, @ 25ºC	24,500 cps	ASTM D-2393
Flash Point	>200°C	ASTM D-92
EpoPro 262B (hardener)		
Visual Appearance	Light yellow Liquid	
Density,	1.2 g/cm³	ASTM E-201
Viscosity, Part B, @ 25ºC	165 cps	ASTM D-2393
Flash Point	>150°C	ASTM D-92
Mix Ratio - part by weight	100A :30B	
Mix Ratio - part by volume	100A: 40B	

Processing Paramaters	@ 25ºC	@ 40ºC	@60ºC	@ 80ºC
Viscosity Mixed:	1,800 cp	520 cp	100 cp	60 cp
Time to Double Viscosity:	340 minutes	90 minutes	75 minutes	65 minutes
Pot life (time to reach 15,000 cp):	>72 hours	42 hours	15 hours	5 hours

Suggested Cure Conditions: 2 hours @85ºC + 2 hours @ 100ºC + 2 hours @ 120ºC **or** 4 hours @ 85ºC + 3 hours @ 105ºC. (Many other cure schedules are possible please contact us for suggestions to suit your application and processing requirements.)

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PHYSICAL PROPERTIES (Tested at 25C unless otherwise noted)		TEST METHOD
Appearance	Off-white solid	Visual
Density	1.5 g/ml	ASTM D792
Shore Hardness	77D	ASTM D-2240
Tensile Strength	10,150 psi	ISO R527
Tensile Elongation	2.6 %	ISO R527
Elastic Modulus from tensile	862,000 psi	ISO R527
Flexural Strength	18,130 psi	ISO 178
Glass Transition Temperature (Tg)	69ºC	ASTM D-648
Heat Deflection Temperature, 66psi	63ºC	DiN 53 458
Coefficient of Thermal Expansion (CTE):		ASTM E-831
Below Tg (alpha 1):	50 ppm / ºC	
Above Tg (alpha 2):	145 ppm / ºC	
Suggested Usage range	-55ºC to +105ºC	
Moisture absorption (4 days immersion @ 25ºC- % weight gain)	0.09%	ASTM D-570
Thermal Conductivity	0.39 W/mk	ASTM F-433
Electrolytic Corrosion	Grade A-1	DIN 53 489
Surface Resistivity @ 25ºC	4×10^{16} Ω	ASTM D-257
Volume Resistivity @ 25ºC	7×10^{15} Ω-cm	ASTM D-257
Tracking Resistance	CTI > 600	IEC 112
Dielectric Strength	450 V/mil	ASTM D-149
Dielectric Constant @ 25ºC & 60 Hz	3.80	ASTM D-150
Dissipitation Factor @ 25ºC & 60 Hz	0.018	ASTM D-150

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

SUGGESTED PROCESSING GUIDELINES:

This system may be mixed manually or by suitable meter-mix equipment. To prepare manually, weighout Part A & Part B in the ratio suggested 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 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.

Apply by pouring or dispensing into your components. For best adhesion, apply to clean dry surfaces only. If improved adhesion is desired, lightly abrade the surface to be bonded with a scouring pad, steel wool or fine sand paper. After abrasion, clean the surface of any loose material and degrease with solvent or detergent to remove any contaminants.

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 extend periods. If this occurs, heat the entire container of 262A or 262B for 4 hours at 60ºC to re-liquefy the material. Allow to cool to ambient temperature and re-mix 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.

SAFETY & PERSONAL HYGIENE:

EpoPro 262A

CAUTION! May cause eye irritation. Prolonged or repeated skin contact may cause irritation, and may cause allergic skin reaction. Harmful if inhaled, if swallowed. In accordance with good industrial practice, handle with care and avoid unnecessary personal contact. Do not inhale mists. Use with adequate ventilation. For industrial use only.

EpoPro 262B

WARNING! May cause eye & skin irritation. Do not get in eyes. Avoid contact with skin and clothing. Avoid breathing vapor and mist. Keep container closed. Use with adequate ventilation. 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 supercedes 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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