Product Datasheet

SP&S Specialty Polymers and Services

EpoPro® 264A/264-2B

EPOXY POTTING SYSTEM – IMPACT AND THERMAL SHOCK RESISTANT

EpoPro® 264A/264-2B system is a two part, filled epoxy system that cures at room temperature or with heat into a rigid, machinable polymer with very good environmental and chemical resistance. The system demonstrates excellent adhesion to most materials including metals, glass, and many plastics and has a convenient mix ratio. EpoPro® 264A/264-2B system is excellent for cryogenic applications and resisting cracking caused by thermal shock and impact. The unique fillers in the EpoPro 264 system are non-abrasive makes this system ideal for meter-mix dispensing equipment. When fully cured EpoPro 264A/264-2B meets the requirements of A-A-59877 and Mil-I-16923 Rev H

The EpoPro 264A/264-2B system is available in a standard black or in 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:

- Small to medium volume potting or encapsulating applications such as transformers, switches, filters, capacitors, and modules.
- Sealing sensors, modules, and many other components
- Conforms to A-A-59877 and Mil-I-16923

HANDLING PROPERTIES	VALUE	TEST METHOD
EpoPro 264A (resin)		
Visual Appearance	Black liquid	
Density, Part A	1.65 g/cm³	ASTM E-201
Viscosity, Part A, @ 25ºC	22,500 cps	ASTM D-2393
Flash Point	>285°C (>545°F)	ASTM D-92
EpoPro 264-2B (hardener)		
Visual Appearance	Tan Liquid	
Density,	1.55 g/cm³	ASTM E-201
Viscosity, Part B, @ 25ºC	6,500 cps	ASTM D-2393
Flash Point	>93°C	ASTM D-92
Mix Ratio - part by weight	2A : 1B	
Mix Ratio - part by volume	2A : 1B	
Viscosity Mixed at 25ºC	11,000 cp	
Gel time, 200 grams at 25C:	40-60 minutes	

Suggested Cure Conditions: 24 hours at room temperature or allow to gel for 1-2 hours at room temperature then heat cure for 4 hours at 65C.

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PHYSICAL PROPERTIES (Tested at 25ºC unless otherwise noted)		TEST METHOD
Appearance	Black Solid	Visual
Density	1.60 g/ml	ASTM D792
Shore Hardness	80 - 85D	ASTM D-2240
Glass Transition Temperature (Tg)	45ºC	ASTM D-648
Coefficient of Thermal Expansion (CTE):		ASTM E-831
Below Tg (alpha 1):	70 ppm / ºC	
Above Tg (alpha 2):	180 ppm / ºC	
Suggested Usage range	-55ºC to +130ºC	
Moisture absorption (24 hours immersion at 25ºC, % wt. gain)	0.12%	ASTM D-570
Thermal Conductivity	0.6 W/mk	ASTM F-433
Surface Resistivity at 25ºC	4 x 10^{16} Ω	ASTM D-257
Volume Resistivity at 25ºC	5 x 10^{15} Ω-cm	ASTM D-257
Dielectric Strength	450 V/mil	ASTM D-149
Dielectric Constant at 25ºC & 60 Hz	4.80	ASTM D-150
Dissipitation Factor at 25ºC & 60 Hz	0.026	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, weigh-out 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 264A or 264-2B 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 264A

Warning! Causes 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 264-2B

WARNING! Causes eye and 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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