

Cox Sales Company
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Technical Data Sheet

505-47 A/B

Two Part Epoxy Encapsulant

Adhesives • Conductives • Encapsulants

Product Description

505-47A/B is a two component epoxy adhesives designed to adhere filter media to end caps. The material will exhibit outstanding adhesive properties and good chemical resistance.

Advantages

- ✓ Two-part epoxy
- ✓ Excellent adhesion to a wide variety of substrates
- ✓ Quick set time
- ✓ Good chemical resistance
- ✓ Automated dispense is easily accomplished
- ✓ Volumetric mix ratio of 2:1
- ✓ Solvent free

Applications

To ensure the long term performance of the assembly, complete cleaning of components and substrates should be performed to remove contamination such as; dust, moisture, salt, and oils, which can cause electrical failure, poor adhesion, or corrosion in an embedded part.

Some filler settling is common during shipping. Container should be thoroughly mixed prior to use. Power mixing is preferred to ensure a homogeneous product. Avoid high speed mixing, which could entrap excessive amounts of air or cause overheating of the mixture resulting in reduced working life.

Accurately weigh resin (505-47A) and hardener (505-47B) into a clean container in the recommended ratio. Blend components by hand with a metal spatula using a kneading motion for 1-2 minutes. Scrape the bottom and sides of the mixing container frequently to produce a uniform mixture. To control/prevent exothermic reaction, mix only enough material as needed.

Typical Uncured Properties

Not for product specifications. The technical data contained herein is intended as reference only. Please contact the Cox Sales Company technical department for assistance and recommendations on specifications for this product.

Property	Test Method	Typical Value
Viscosity Part A Part B	EMS TP #107	27,400 cP 5,320 cP
Density Part A Part B	EMS TP#106	14.30 lb/gal 11.60 lb/gal
Color Part A Part B	Visual	Gray Off White

Mixed Properties

Property	Test Method	Typical Value
Mix Ratio (A:B) By Weight By Volume		100:40.7 2:1
Gel Time, 100g		20-25 min
Color	Visual	Off White

Cure Schedule

505-47A/B should be cured so as to control effects of the exothermic reaction. Actual cure time will depend on ambient temperature and mass of mixture. Longer cure schedules may be needed when curing thin sections or where the mixture is adjacent to a heat sink.

Cure Temperature	Cure Times
25°C	24 hours

Typical Cured Properties

Property	Test Method	Typical Value
Hardness, Shore D	ASTM D-2240	80-90
Thermal Conductivity		0.29 W/m·K
Volume Resistivity		$1 \times 10^{14} \Omega \cdot \text{cm}$
Dielectric Strength		>450 V/mil

Clean Up

- 505-47A/B can be easily cleaned with Acetone, Methyl Ethyl Ketone or PM Acetate prior to cure. Other less stringent solvents and cleaners may be used but may not be as effective at cleaning.
- In case of a small spill, activate available exhaust ventilation equipment in the immediate spill area. Wipe up or absorb spilled material with vermiculite or other similar material. Wash area with soapy water to remove residue. Collect absorbed material and water rinses in appropriate containers.
- It is important to dispose this material in accordance with current Federal, State, and local regulations.

Storage and Handling

- 505-47A/B has a maximum shelf life of twelve months if left in an unopened container and stored at 25°C.
- Exposure to humidity in the air should be minimized. Prolonged exposure to humidity may harm the reactivity, physical properties, and surface appearance.
- Material should be store in a cool dry place.

Health and Safety

- 505-47A/B can cause severe eye irritation including stinging, redness and eye swelling. Consult a physician immediately if symptoms occur after use.
- Avoid skin contact. 505-47A/B can cause mild skin irritations including redness or induce a rash. It should not aggravate any current skin conditions such as dermatitis.
- Consult EMS's Product Material Safety Data Sheet for additional information on 505-47A/B.

Application Assistance

Cox Sales Company application specialists are available to assist you in production start-up with 505-47A/B. For information, please call Cox Sales Company at (540)345-2636

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2-18-10 Rev. 1 505-47A/B zjh

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