**ALFA INTERNATIONAL CORPORATION** 





www.alfaadhesives.com

# **Two-Part Epoxy Resin**

# TECHNICAL PRODUCT BULLETIN

# GENERAL DESCRIPTION

AL428FDA is a two-part, heat-resistant and low exothermic epoxy adhesive formulation. It is a 100% solid epoxy adhesive, with superior chemical resistance and shear strength.

AL428FDA contains a thixotropic agent, which impedes thinning out of the material during heat cure when properly mixed and cured.

# **ADVANTAGES**

- Develops a strong bond
- Durable to numerous construction materials such as metals, glass, rubber, ceramics, concrete and phenolic plastics
- Provides premium resistance to water, salt solutions, galvanic action, acids, alkalies and most chemicals

# FDA INFORMATION

Title 21 of the Code of Federal Regulations (CFR) permits and regulates the use of epoxy resins such as AL428FDA - Part A as an indirect food additive in food contact applications. Some of the sections of 21 CFR that support the above are 175.105, 175.300, 175.320, and 176.17.

AL428FDA - Part B complies with FDA regulations listed in the Title 21 of the CFR, Sections:

- 175.105 (c)(5) Adhesives
- 175.300 (b)(3)(viii)(c) Coatings adjunct for epoxy resins
- 176.170 (b)(1) Components of paper and paperboard in contact with aqueous and fatty foods.
- 175.300 (b)(xxxii) Side seam cements

AL428FDA - Part B will comply with the above regulations as long as it is used only with other approved materials, and as long as the finished product conforms with extractives limitations for the use-situation as specified in those regulations.

# **SPECIFICATIONS**

| Base  | Epoxy                        |
|---|------------------------------|
| Solvent   | None                         |
| Flammability  | Non-Flammable                |
| Color   | Amber                        |
| Solids Contents   | 100%                         |
| Weight/gal (Mixed 1:1)  | 9.0 lbs.                     |
| Coverage  | 250-350 ft <sup>2</sup> /gal |
| Shelf life 2 years, closed pac                                      | _                            |
|   |                              |
| Service Temperature   | -40°C to 163°C               |
| Hardness SD   | 78                           |
| Tensile Shear Strength Al to Al                                     | 2700 psi                     |
| Passes 10 day humidity test mil STD 8:0 above 95% with condensation |                              |
| Curing times for various temperatures are as follows:               |                              |
| 20 min.   | @ 177°C                      |
| 30 min.   | @ 121°C                      |
| 80 min.   | @ 93°C                       |
| 4-6 hours   | @ 66°C                       |
|   |                              |

# **WORKING TIME**

AL428FDA's pot life and exotherm are dependent upon several factors: mass of resin, amount of catalyst used, ambient temperature and type of equipment used, among others. A 200 grams mix of 40% catalyst and 60% resin will have a pot life of approximately 30 minutes at room temperature. A 1:1 mix ratio of catalyst and resin will have 40 minutes pot life at room temperature.

32 Mechanic Avenue Unit 99 • Woonsocket RI 02895•Tel. 401-765-0503 • Fax 401-765-0508• www.alfaadhesiyes.com• E-mail: info@ alfaadhesiyes.com



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# **APPLICATION**

- 1. Clean and throughly dry all surfaces to be bonded
- 2. Follow mixing-dispensing instructions as shown on package
- **3.** Apply a thin coat of the mix (not more than 0.010 inches) by brush, spray, or roller to the surfaces to be bonded
- **4.** Genlty press surfaces firmly together

# PACKAGING INFORMATION

AL428FDA is available in 50 grams divided plastic bags and in large unit (two-container) pint, quart, and gallon kits. Each kit consists of the correct amount of the specified epoxy material and curing agent hardener formulations, each supplied in separate containers with complete proportioning, use and cure instructions.

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