



Product
Bulletin

AL428

Two-Part Epoxy Resin

GENERAL DESCRIPTION

AL428 is a two part, heat-resistant and low exotherm, epoxy adhesive formulation. It is a 100% solid epoxy adhesive, with superior chemical resistance and shear strength. AL428 contains a thixotropic agent which impedes thinning out of the material during heat cure when properly mixed and cured.

AL428 passes NASA's outgassing testing (ASTM E-595) and is listed in NASA's Outgassing Data for Selecting Spacecraft Materials list.

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, alkalis and most chemicals

APPLICATION

1. Clean and thoroughly 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. Gently press surfaces firmly together

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 ² /gal
Shelf life	2 years, closed packaging, unopened
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

NASA OUTGASSING RESULTS

TML (Total Mass Loss) %	0.98
CVCM (Collected Volatile Condensable Materials) %	0.01
WVR (Water Vapor Recovery) %	0.29

WORKING TIME

AL428'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.

PACKAGING INFORMATION



ALFA INTERNATIONAL CORPORATION
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AL428 is available in 5, 10, 20, and 50 grams divided plastic bags. AL428 is also available 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.

The information given and the recommendations made herein are based on our research and are believed to be accurate but no guarantee of their accuracy is made. In every case we urge and recommend that purchasers before using any product in full scale production make their own tests to determine to their own satisfaction whether the product is of acceptable quality and is suitable for their particular purposes under their own operation conditions. No representative of ours has any authority to waive or change the foregoing provisions but, subject to such provisions, our engineers are available to assist purchasers in adapting our products to their needs and to the circumstances prevailing in their business. Nothing contained herein shall be construed to imply the nonexistence of any relevant patents or to constitute a permission, inducement or recommendation to practice any invention governed by any patent, without the authority from the owner of this patent. We also expect purchasers to use our products in accordance with the guiding principles of the Chemical Manufacturers Association's Responsible Care® program.

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