



**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, alkalies 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 <sup>2</sup> /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



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.