

Adelphi A-951

Bonding Adhesives

Adelphi A951 is an easy to handle, 100% reactive, two part, epoxy producing a flexible, high strength bonds for wide varieties of materials. Coated parts may be mated without delay to cure at room temperature and do not require pressure other than that necessary to keep components in intimate contact during cure.

Fully cured bonds exhibit minimal shrinkage, are electrical insulators and provide excellent resistance to weather, galvanic action and most chemical, acids and alkalis.

It is especially designed for:

- Bonding rigid expanded plastic foams to themselves or to metal, plywood, or other rigid materials.
- Bonding a variety of skins to cores (expanded polystyrene foam, foamed glass, honeycomb, etc.) in the fabrication of sandwich panels.
- Bonding all metals and other rigid materials (such as glass, ceramics, most plastics, plastic foams and structural laminates) to themselves and to each other. Fully Cured metal to metal bonds, tested at room temperature using MMM-A-132 procedures, yield up to 2500 psi.
- Typical lap shear values obtained when Adelphi A951 is used to bond 0.064" etched 2024T3 aluminum alloy to itself in a 1/2 overlap are as follows:

	Viscosity	Color	Base	Wgt /Gal	Solids	Diluent	Shelf life
Part A	Medium	Red	Modified Epoxy	9.5	100 %	Do not Dilute	1 year
Part B	Syrup	Amber		8.2	100%		

Test Temperature	Tensile Shear, psi
-67 F or -55C	2000
77F or 25C	2500
180F or 82C	400

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Surface Preparation:

All bonding surfaces must be thoroughly cleaned, degreased and dried. For plastic surfaces, remove mold release if any.

Preparation of Adhesive:

Always stir each part individually. Proportion accurately and mix slowly to avoid entrapping air.

Note: Pot life can be lengthened substantially if shallow mixing vessels are used or smaller batches are mixed. Cover mixed material to prevent water absorption.

Mixed adhesive may be applied with trowel, spatula, knife, paint roller, brush, etc. Apply enough mixed adhesive to leave about 4-6 mils in the final glue line. This may be accomplished by coating 4-6 mils on one surface only or by coating 2-3 mils on each surface.

If one surface is porous, additional adhesive must be applied to fill the voids and yet produce a final glue line thickness of 4-6 mils.

Cure Time:

Room Temperature:

At room temperature, assemblies can be handled in approximately 8-14 hours. Adelphi A951 develops 85% of its maximum strength in 24-48 hours.

NOTE: The bond continues to advance in strength for approximately one week.

Fast Cure:

If a faster cure is required, the following can be used:

Temperature	Cure Time
150 F or 65C	120 minutes
200 F or 93C	45 minutes
250 F or 120C	30 minutes
300 F or 148C	10 minutes

Bonds will continue to improve in strength at room temperature until optimum is reached, usually within 3-4 days.

Technical Questions? Call us. We are happy to help! +631-537-8390

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