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Adelphi A-779

Adhesives for Dissimilar Substrates Including Polystyrene

Adelphi A779 is a low mixed viscosity, high strength, 100% reactive, room temperature curing formulated epoxy adhesive for:

- Bonding rigid expanded plastic foams to themselves or to metal, plywood, or other rigid materials.
- Bonding a wide 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.

	Viscosity (cps) @ 77F	Color	Base	Wgt/Gal	Solids	Diluent	Shelf Life
Part A	1000	Red	Modified epoxy	9.5 lbs.	97%	Do not dilute	1 year
Part B	20000	Amber		8.2 lbs.	100%		

Note: Fully cured panels consisting of degreased steel or etched aluminum skins and foamed glass cores produced with this adhesive pass FPL Test Cycles (ASTM Test D1037-55T), also given in ASTM C481, Cycle A.

	Mixing Ratio (by weight)	Properties	
		Test Temperature	Tensile Shear, psi
Part A	100 Parts	-67F	2000
Part B	100 Parts	77F	2500
		180F	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 thoroughly first. Proportion accurately and mix slowly to avoid entrapping air.

Adelphi A779 Part A is colored red; Part B is colored amber. Mix equal amounts (by volume) and stir until the color of the mixture is uniform.

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 paint roller, brush or conventional spray equipment, 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, more 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 A779 develops 85% of its maximum strength in 24-48 hours.
NOTE: The bond continues to advance in strength for approximately one week.

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Force Cure

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

Elevated Temperatures

Temperature	Cure Time
150° F	120 minutes
200° F	45 minutes
250° F	30 minutes
300° F	10 minutes

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

Glass Transition Tg	57.07 C
Hardness	Shore D65 +/- 5
Dielectric Constant @ 105 cps	3.25 +/- 0.4
Volume Resistivity @ 25C +/- 3C	Min 1.00 x 10^{12} ohm-cm
Thermal Coefficient of Expansion	65 x 10-6 inches/inches/C

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

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