

STAR Technology

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ER2109

Two Part Epoxy Adhesive

DESCRIPTION

ER2109 is an aggressive yet easy to mix two-part thixotropic epoxy adhesive made for adhesion to a variety of substrates. ER2109 can be mixed in ratios of from 2:1 to 1:1 by weight or by volume and still deliver outstanding adhesive strength and chemical resistance. ER2109 will adhere to most metals, wood, Styrofoam, glass, most engineering plastics and many surface treated polyolifins. Because of the slow gel time and simple mix ratios, ER2109 lends itself to a variety of manual and automated dispense possibilities. Viscosity may be thixod for vertical and non-sag applications. The 2:1 mix ratio gives higher lap shears, higher tensile strength and lower elongation values. Complies with FDA 21 CFR 175.300, 21 CFR 176.170, and 21 CFR 175.105.

TYPICAL PROPERTIES

	<u>TEST METHOD</u>	<u>VALUE</u>
Gel time (hours):		
100 Gram Mass at 75°F:		2 - 3
Thin Film at 75°F:		5 - 9
Full Cure Time at 75°F (hours):		16
Part A:		
Viscosity (cps):	ASTM D2393	12000
Color:		Clear
Part B:		
Viscosity (cps):	ASTM D2393	4000
Color:		Amber
Mixed Product:		
Viscosity (cps):		See Chart Below
Color:		Amber
Tg (°C):	ASTM D3418	
1:1 Mix Ratio:		65
2:1 Mix Ratio:		96
1:1 MIX RATIO PROPERTIES		
Lap Shear [CRS to CRS] (psi):	ASTM D1002	1800
Tensile Strength (psi):	ASTM D638	6400
Elongation at Break (%):		3.8
Compressive strength (psi):		11400
Flexural Modulus (psi):		3.26x10 ⁷
Coefficient of Thermal Expansion (unit/unit /°C):		5x10 ⁻⁵
Maximum Service Temperature (°F):		500 [Intermittent]

GEL TIME, HARDNESS AND MIXED VISCOSITY AT VARIOUS MIX RATIOS:

Mix ratio A:B	Gel time 100g (minutes)	Shore Hardness	Mixed Viscosity (cps)
2.0 : 1.0	273	70D	8040
1.5 : 1.0	222	75D	7000
1.0 : 1.0	169	68D	5220
0.5 : 1.0	212	60A	3820

Mix Ratio:

By Weight:	See Chart Above
By Volume:	See Chart Above
Shelf Life (months):	
Part A:	12
Part B:	12

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APPLICATION PROCEDURES

Carefully weigh out appropriate amounts of resin and hardener into a clean mixing container and thoroughly mix until all streaks and striations are gone. Scrape the sides and bottom frequently to ensure complete mixing.

For 1# and 2# kits, add all of Part B to Part A and mix thoroughly.

CAUTION: Unmixed compound from the sides or bottom of the container can cause soft spots or uncured areas in the completed piece. To prevent this, transfer the entire mixed contents to a second clean container and remix for a short time before using.

PRECAUTIONS

For industrial use only. Keep away from children.

Refer to the Material Safety Data Sheets (MSDS forms) pertaining to this product before using.

Avoid contact with skin or eyes. In the event of an eye splash or contact, immediately flush with cold water for 15 minutes and contact a physician. If skin contact occurs, wash with mild soap and water. The wearing of safety glasses with side shields and impervious gloves is recommended.

RESIN AND HARDENER WARNING STATEMENT

May cause allergic skin reaction. Avoid all contact with skin, eyes, and clothing. Wash thoroughly after handling.

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