



ES6247

High Peel Strength Epoxy Adhesive

DESCRIPTION

ES6247 is a two component toughened epoxy adhesive with very good cured properties that provides excellent bonds to a variety of substrates. Its blend of high lap shear and T-Peel values allow superior performance in demanding bonding applications. ES6247 adheres very well to wood, metal, composites and some plastics. The bonded components exhibit tough and durable performance for long term stability in use.

PRODUCT SPECIFICATIONS

	ES6247 Part A	ES6247 Part B	ASTM Method
Color	Black	White	Visual
Viscosity,	Non-Sag Paste	Non-Sag Paste	D2392
Specific Gravity, gms./cc	1.11	1.11	D1475
Mix Ratio	100 : 50 By Weight or Volume		PTM&W
Pot Life, 4 fl.oz. Mass @ 77°F	90 minutes		D2471

DIRECTIONS FOR USE

PREPARATION: All surfaces to be bonded or patched must be free of dirt, oil and grease. The better the surface prep, the better the results! Sanding or roughening the area to be bonded increases the surface area and enhances the bond. See PTM&W Bulletin “Guidelines for Metal Surface Preparation” for more information.

MIXING: Measure out ES6247 A and B, combine, and mix thoroughly until a uniform color and consistency is reached. Mix for at least 1 to 2 minutes, scraping the sides and bottom of the container to avoid leaving unmixed material that will cause soft spots in the cured material.

APPLICATION and CURING: Apply mixed material to roughened area of the parts to be bonded. Press surfaces firmly together and let set for 16 hours or more at 75°F. If necessary, place assembly in a jig or other device to prevent movement during initial curing time. Curing time is 16 hours at 75°F, plus 3 hours at 180°F. The material to be bonded may be preheated to accelerate curing time, or very light heat can be applied after the parts have been bonded.

PACKAGING WEIGHTS

	Quart Kit	Gallon Kit	Pail Kit
ES6247 Part A	2 lb.	8 lb.	40 lb.
ES6247 Part B	1 lb.	4 lb.	20 lb.
Kit	3 lb.	12 lb.	60 lb.

TYPICAL MECHANICAL PROPERTIES

	ES6247 A/B	ASTM Method
Mix Ratio,	100 : 50 By Weight, or Volume	PTM&W
Color	Black	Visual
Mixed Viscosity, centipoise	Non-Sag Paste	D2393
Pot Life, 4 fl. Oz. Mass, @77°F	90 minutes	D2471
Cured Hardness, Shore D	85 Shore D	D2240
Cure Time	16 hrs @ 77°F, plus 3 hrs @ 180°F	PTM&W
Specific Gravity, grams, cc	1.113	D1475
Density, lb. / cu. inch	.0402	D792
Specific Volume, cu. in. / lb.	24.86	
Compressive Strength, psi	10,200 psi	D695
Compressive Modulus, psi	345,036 psi	
ASTM D3165 Lap Shear Tests:		
6061 T6 Aluminum to Aluminum, 1 week RT Cure	3,965 psi	D3165
6061 T6 Aluminum to Aluminum, 6 hrs. @ 150°F Cure	4,639 psi	
6061 T6 Aluminum to G10 Laminate, 1 week RT Cure	3,934 psi	
6061 T6 Aluminum to G10 Laminate, 6 hrs. @ 150°F Cure	4,151 psi	
6061 T6 Aluminum to 2x2 12K Carbon, 7 Days RT Cure	3,476 psi	
6061 T6 Aluminum to 2x2 12K Carbon, ON RT + 6 hrs. @ 150°F Cure	3,072 psi	
2x2 12K Carbon to 2x2 12K Carbon, 7 Days RT Cure	3,551 psi	
2x2 12K Carbon to 2x2 12K Carbon, ON RT + 6 hrs. @ 150°F Cure	3,574 psi	
6061 T6 Aluminum to G10 Laminate, Hand Sand, Alum. Oxide 80 Grit, 7 Days RT Cure	3,725 psi	
6061 T6 Aluminum to G10 Laminate, Hand Sand, Alum. Oxide 80 Grit, 6 hrs. @ 150°F Cure	3,972 psi	
T-Peel, 6061-T6 Aluminum, ASTM D2651 FPL Etch		
	19.3 pli	D1876
Glass Transition Temp., DMA, Tg Peak		
	192°F	D7028

SAFETY and HANDLING

PTM&W epoxy products are made from raw materials carefully chosen to minimize or even eliminate toxic chemicals, and therefore offer the user high performance products with minimum hazard potential when properly used. Generally, the PTM&W epoxy resins and hardeners will present no handling problems if users exercise care to protect the skin and eyes, and if good ventilation is provided in the work areas. However, breathing of mist or vapors may cause allergenic respiratory reaction, especially in highly sensitive individuals. As such, avoid contact with eyes and skin, and avoid breathing vapors. Wear protective rubber apron, clothing, nitrile rubber gloves, face shield or other items as required to prevent contact with the skin. In case of skin contact, immediately wash with soap and water, followed by a rinse of the area with vinegar, and then a further wash with soap and water. The vinegar will neutralize the hardener and lessen the chances of long term effects. Use goggles, a face shield, safety glasses or other items as required to prevent contact with the eyes. If material gets into the eyes, immediately flush with water for at least 15 minutes and call a physician. Generally, keep the work area as uncluttered and clean as possible, and clean up any minor spills immediately to prevent accidental skin contact at a later time. Keep tools clean and properly stored. Dispose of trash and empty containers properly. Do not use any of these types of products until Material Safety Data Sheets have been read and understood.

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