

Epoxy Paste Bonding Adhesive

Part # - 1101



High strength structural adhesive used to bond and assemble sub-components to form rigid final structures. The high viscosity provides excellent gap filling characteristics that strengthen loose fitting joints and panels. #1101 forms tough durable bonds to composites, SMC, many metals, and even common construction materials. It is easy to use with its 1:1 mix ratio, and 6-8 hour cure time at 77 degrees F.

DESCRIPTION

Epoxy Paste Bonding Adhesive is a light grayish-tan two part epoxy adhesive that was developed specifically for difficult bonding problems involving similar or dissimilar materials. Epoxy Paste Bonding Adhesive provides excellent adhesion to a wide variety of materials such as aluminum, steel, brass, concrete, brick, glass, stone, ceramics, tile and wood. Epoxy Paste Bonding Adhesive has very good handling characteristics. The mix ratio of 1 to 1 by weight or volume allows easy measuring. It has a creamy, smooth viscosity; is very easy to mix; and has good thixotropy for application to contoured or vertical surfaces without sag or run off. Epoxy Paste Bonding Adhesive cures relatively quickly, developing sufficient "green strength" to allow bonded items to be removed from the holding fixtures and handled within a few hours. The cured material has excellent strength, as well as, good resistance to weak acids, moisture and weather.

TYPICAL APPLICATIONS

Epoxy Paste Bonding Adhesive is an excellent adhesive for all types of bonding applications. It is very versatile, and can bond a wide variety of materials, so it becomes a very effective tool in general shop situations. Often, Epoxy Paste Bonding Adhesive will outperform other supposed high performance materials, and give handling advantages as well. It has been successfully used for many years in a variety of general bonding uses, as well as, numerous production applications.

DIRECTIONS FOR USE

PREPARATION: All surfaces to be bonded or patched must be free of dirt, oil and grease. Sanding or roughening the area to be bonded increases the surface area and enhances the bond.

MIXING: Measure out equal parts of Epoxy Paste Bonding Adhesive 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 un mixed 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 1 to 2 hours at 75°F. If necessary, place assembly in a jig or other device to prevent movement during initial curing time. Curing time is 6 to 8 hours at 75°F, or 50 to 60 minutes at 140°F. The bonded object can be put into light service at this time, however, for maximum strength, wait 24 hours. 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.

SAFETY and HANDLING: 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 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, all epoxy resins and hardeners can be irritating to the skin, and prolonged contact may result in sensitization; and 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, 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.

Product Specifications

	Part A	Part B	Test Method
Color	White	Tan	Visual
Viscosity, @ 77° F, centipoise	Paste	Paste	ASTM D2393
Specific Gravity, gms./cc	1.54	1.49	ASTM D1475
Mix Ratio	100 : 100 By Weight or Volume		PTM&W
Pot Life, 4 fl. Oz. Mass @ 77° F	25 - 30 minutes		ASTM D2471

Typical Mechanical Properties

	A / B	Test Method
Mixed Viscosity, @ 77° F, centipoise	Smooth Paste	ASTM D2393
Gel Time, 4 fluid ounces, @ 77° F	25 - 30 minutes	ASTM D2471
Cure Time	@ 77° F: 6 to 8 Hours @ 140° F: 45 to 60 Minutes	PTM&W
Handling Strength	3 to 4 Hours	PTM&W
Cured Hardness, Shore D	90 Shore D	ASTM D2240
Operating Temperature	-50° F to 150° F	PTM&W
Specific Gravity, gms./cc	1.51	D1475
Tensile Strength, Cast Bar, psi	7,200 psi	ASTM D638
Elongation at Break, %	6%	ASTM D638
Compressive Strength, psi	14,300 psi	ASTM D695
Water Absorption	< 0.2 %	ASTM D570
Aluminum to Aluminum Tensile Lap Shear	@ 77° F: 3,480 psi @ 140° F: 2,000 psi	ASTM D1002