

Master Bond Business Digest

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ONE PART EPOXY ADHESIVE RESISTS HIGH TEMPERATURES

Master Bond Inc. has introduced a new single component, high performance epoxy adhesive called EP13. This compound requires no mixing and has a virtually unlimited working life at room temperatures. EP13 has excellent bond strength to similar and dissimilar substrates and superior dimensional stability. It has a service operating temperature range of -60°F to 500°F.

Master Bond EP13 is 100% reactive and does not contain any solvents or diluents. It can be applied to vertical surfaces without sagging or dripping. It cures at temperatures of 300°F to 350°F for 60-90 minutes. The higher the temperature the shorter the cure speed.

EP13 possesses high compressive strength and is readily machinable. Upon cure, EP13 obtains tensile shear strengths in excess of 3,500 psi. Resistance to a wide range of chemicals including fuels, acids, bases, oils and many solvents is exceptional. EP13 has low shrinkage upon cure and good electrical insulation properties. The standard color is grey.

Master Bond EP13 fully meets the requirements of MMM-A-132. It is available in pint, quart, gallon and 5 gallon containers.



HIGH TENSILE STRENGTH EPOXY FOR TESTING FLAME SPRAYED COATINGS

Master Bond EP15 is a one part, no mix epoxy system with exceptionally high tensile strength for testing adhesion or cohesive strength of flame sprayed coatings as per ASTM specification C633-69. The tensile strength of EP15 is over 12,000 psi. This system cures in 60-90 minutes at 300-350°F. It contains no solvents or diluents.

EP15 can also be used as a structural adhesive where high tensile strength might be needed. It has excellent bond strength to similar and dissimilar substrates. Master Bond EP15 is available in 1/2 pint, pint, quart, gallon and 5 gallon pail containers.

Thermal Conductive Epoxy Film & Preforms

Master Bond FL901AO has impressive bonding capabilities and maintains its properties even upon exposure to harsh environmental conditions. It cures at 250°F (125 °C) in one hr. or at 300°F (150°C) in 30 min..

FL901AO features outstanding resistance to thermal shock and vibration and impact. It's thermal stability is excellent - the weight loss at 600°F (300°C) is less than 0.4%. The low level of total ionic impurities of less than 40 ppm makes it a prime candidate for even the most demanding electronic assembly applications. FL901AO is available in several film thicknesses, and has minimal squeeze out during bonding. Preforms can be laser or die cut to fit parts.



Epoxy Has Superb Flexibility And Exceptional Peel Strength For Bonding, Sealing & Casting

Master Bond Inc. has developed a highly flexible two component epoxy compound called EP40, for bonding, sealing and casting. EP40 bonds well to a wide variety of substrates including engineering plastics, metals, glass and ceramics. EP40 has a convenient one to one mix ratio by weight or volume and can cure at ambient temperatures or more rapidly at elevated temperatures. Electrical insulation properties are excellent. The high flexibility of EP40 enhances resistance to mechanical shock and vibration as well as thermal cycling and thermal shocks. The low viscosity of EP40 allows its use as a potting and encapsulating system. Most noteworthy is the adhesion of EP40 to plastics such as polycarbonate and acrylics. Lap shear strengths of over 1000 psi and peel strengths of more than 20 pli are readily obtained. The service temperature range is from -100 to 250°F. EP40 is gaining wide acceptance as a superior adhesive and sealant as well as an electrical encapsulation material where resistance to thermal shock and cycling is required.



NEW LOW VISCOSITY, OPTICALLY CLEAR EPOXY

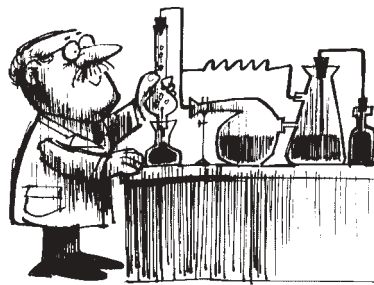
Master Bond Inc. has successfully introduced EP37-3, a new tough, optically clear, low viscosity epoxy compound for high performance casting, coating, bonding, and sealing. EP37-3 is a two component formulation with a non-critical two-to-one mix ratio, weight or volume. This low viscosity epoxy resin based composition cures readily at ambient or more quickly at elevated temperatures. The curing reaction generates very little heat, and EP37-3 epoxy system can be used to prepare large volume castings as well as small volume pottings and encapsulations.

The cured epoxy compound exhibits high optical clarity, and is quite tough with attractive physical strength properties. EP37-3 can be employed over the impressively wide temperature range of -80°F to 250°F. It is 100% reactive and does not contain any volatiles. EP37-3 has excellent dimensional stability and exceptionally low shrinkage while curing.

EP37-3 offers superior adhesion to both metallic and nonmetallic substrates. The cured material features excellent long term resistance to water, salts, many acids and bases as well as various organic solvents. It is an excellent choice for coating and bonding applications where toughness, optical clarity and serviceability over a wide temperature range are required. Also, its low exotherm while curing makes it ideal for larger castings. It is available in pints, quarts, gallons and 5 gallon pails.



HOT FROM THE LAB...



- ◆ *Nanosilica reinforced epoxy resin offers outstanding toughness and abrasion resistance*
- ◆ *Two part thermally conductive silicone potting compound*
- ◆ *New epoxy for food related applications*

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