RELTEK

Adhesives and Coatings for Harsh Environments

ADHESION PROMOTERS & PRIMERS				
BONDiT™ Product	Uses	System	Key Properties	Applications
A-3 Data Sheet MSDS	• Adhesion promoter • Primer • Adhesive	Silane alcohol solution, one part, very low viscosity	• Adhesion promoter and primer for coatings, sealants and adhesives on metals, glass and ceramic • Exceptional moisture and high pH resistance • Outstanding harsh environment protection and cathodic corrosion protection when used with the B-4811	Exceptional corrosion and chemical protection. Promotes adhesion and provides primer protection on most metals, ceramic and glass (including sapphire), most elastomers (including silicon) and low surface energy substrates. Functional for a wide range of overmold materials, paints, coatings, encapsulates. High thermal stability [250°C] and chemical resistance. Suitable for bonding semiconductor material. Used as an adhesive for very thin bond lines (½ mil), such as for glass-to-glass and glass-to-polyethylene bonding. Compatible for use with BONDiT B-4X epoxy series. Ambient cure 60 min or accelerated thermal cure. Water white to slight amber.
A-43 Data Sheet MSDS	• Adhesion promoter • Primer • Adhesive	Silane alcohol solution, one part, very low viscosity	• Adhesion promoter for most thermoplastics, thermoset materials, elastomers, and polyurethanes • Can be used on metals, glass and ceramic	High functionality produces good bond strength in bonding difficult-to-bond substrates, such as polyethylene. Adhesion promoter on most substrates for a wide range of vulcanizing elastomers. Used as a primer for PU and TPU overmolding to a wide range of substrates. Higher bond strengths with less material use, but lower moisture resistance than A-3. Ambient cure 60 min or short thermal cure. Slight amber.
A-46 Data Sheet MSDS	• Sealant & coating • Conformal coating	Silane alcohol solution, one part, very low viscosity	• Optical clear coat for metals, glass and ceramic • Sealant for ceramic and electronic components (e.g. flex-PCB's exposed to moisture) • Architectural coating	Handles continuous temperatures to 250°C (500°F) Excellent moisture seal and exterior environment protection. Maintains clear coat under UV exposure to sunlight. Seals micro-pores. Wets siliceous substrates easily, self leveling to 2 mil coating, pinhole free in one coat. Superb coating for stainless steel, copper and aluminum architectural finishes. Superior replacement for lacquer type coating. Ambient cure 60 min or accelerated thermal cure.
A-53 MSDS	• Adhesion promoter • Primer	Silane alcohol solution, one part, very low viscosity	• Adhesion promoter and primer for cationic UV cure systems	Broad-based adhesion promoter and primer that will not poison cationic cure coatings and adhesives. Ambient cure 60 min or accelerated thermal cure. Water white color.
C-6 MSDS	• Adhesion promoter • Primer	Silane alcohol solution, one part, very low	• Adhesion promoter and primer for molding poly-urethane and rubber	High functionality produces good bond strength for difficult-to-bond substrates, such as polyethylene. Adhesion promoter on many substrates for a wide range of vulcanizing elastomers. Primer for PU overmolding to a wide range of substrates. Ambient cure 60 min or accelerated thermal cure. Amber color.
C-21 MSDS	• Adhesion promoter • Primer	Silane alcohol solution, one part, low viscosity	• Adhesion promoter and primer for molding thermoplastics, such as polyethylene	Primer and adhesion promoter on various substrates for polyolefin, urethane coatings and over molding. Forms cohesive bonds with LDPE. Suitable for TPE and TPR. Ambient cure 60 min or accelerated thermal cure. Amber color.
C-52 MSDS	• Adhesion promoter • Primer	Silane alcohol solution, one part, very low viscosity	• Adhesion promoter and primer for molding thermo-plastics, such as polyethylene	Primer and adhesion promoter on various substrates for polyolefin, flouropolymers (other then PTFE), polycarbonate and acrylic, particularly for molding applications. Forms cohesive bonds with HDPE and MDPE to metal in molding operations. Bonds shrink tubing to PE cable jackets. Ambient cure 60 min or accelerated thermal cure.

ADHESIVES, SEALANTS, COATINGS & PRIMERS				
BONDiT™ Product	Uses	System	Key Properties	Applications
HM-502 Data Sheet MSDS	• Adhesive coating	Ethylene copolymer hotmelt, *water-based* emulsion, one part	• Hotmelt adhesive for a wide range of substrates • Exceptionally high moisture resistance	Protective coating and adhesive for dissimilar materials including low surface energy polymers, elastomers, metals, glass and composites. High moisture resistance, fouling resistant coating. Excellent for high voltage applications, laminating applications and fast assembly operations as pre-coated assembly. Oven cure, 30 min @ 200°F.
HM-505 MSDS	• Adhesive coating	Ethylene copolymer hotmelt, *solvent-based* emulsion, one part	• Hotmelt adhesive for a wide range of substrates • Exceptionally high moisture resistance	Protective coating and adhesive for dissimilar materials including low surface energy polymers, elastomers, metals, glass, and composites. High moisture resistance, fouling resistant coating. Excellent for high voltage applications and laminating applications, fast assembly operations as pre-coated assembly. Oven cure, 30 min @ 200°F.
B-45 Data Sheet MSDS	• Potting • Paint • Coating • Adhesive	Flexible two-part epoxy, 2:1 mix ratio	• Excellent adhesive for low surface energy plastics without primer • Used in potting, painting, and protective coating, applications • Excellent thermal and mechanical shock resistance • Ease of use	Flexible to 130% elongation, good chemical resistance. Bonds to most plastics, rubber, polyurethane, metals, ceramic and concrete. Tough, flexible, chemically resistant, non-blush clear coating with medium gloss finish. Potting compound alternative to castable polyurethanes, particularly for electrical cable connector transducer termination. Excellent for electrical and electronic applications as protective encapsulate against very wide range of environmental exposures, particularly moisture and sea water. Can be applied to oily surfaces. Will cure Underwater. Ambient 24 hour or 3 hours at 100°C for full cure.
B-45EC MSDS	• Adhesive • Sealant	Flexible two-part thixotropic *or* paste epoxy, two-part 2:1 mix ratio	• Electrically conductive adhesive without metal filler • High conductivity in three axes • Light weight, high chemical resistance	Conductive adhesive designed with state-of-the-art extrinsically conductive polymers. Bonds to most plastics, rubber, polyurethane, metals, ceramic and concrete. Excellent adhesion to low surface energy plastics such as polyethylene and acetal without primer. Clean room quality. Ambient 24 hour or accelerated thermal cure.
B-45ESD MSDS	• Coating • Potting • Sealant • Adhesive	Flexible two-part epoxy, 2:1 mix ratio	• Electro static dissipative adhesive without metal filler. • Three Axes conductivity • Not dependent on atmospheric moisture	Coating material designed with state-of-the-art extrinsically conductive polymers. Excellent adhesion to low surface energy plastics such as polyethylene and acetal, without primer. Bonds to most plastics, rubber, polyurethane, metals, ceramic and concrete. Clean room quality. Ambient 24 hour or accelerated thermal cure.
B-45TH Data Sheet MSDS	• Adhesive • Sealant • Conformal coating	Flexible two-part *thixotropic* epoxy, 2:1 mix ratio	• Excellent adhesion to low surface energy plastics without primer • Bonding dissimilar materials • Chemical and shock resistance • Ease of use	Bonds difficult-to-bond substrates and dissimilar materials such as UHMW polyethylene and acetal (Delrin) to steel, wood, plastics, rubber, urethane and concrete. Survives harsh environments, particularly moisture marine and sub sea. Exceptional performance as a universal adhesive for industrial applications. Will cure underwater. Can be applied to oily surfaces. Ambient 24 hour or accelerated thermal cure.
B-45CC MSDS	• Caulk • Sealant • Adhesive	Flexible two-part *trowelable* epoxy *paste*, 2:1 mix ratio	• Excellent adhesion to low surface energy plastics without primer • Caulking and sealing dissimilar materials for harsh environments • High impact resistance • Ease of use	Caulks and seals difficult-to-bond substrates and dissimilar materials such as UHMW polyethylene and acetal (Delrin) to steel, wood, plastics, rubber, urethane and concrete Survives harsh environments, particularly moisture, harsh chemical, ,marine and sub sea. Exceptional performance as a universal caulk for industrial applications. Will cure underwater. Can be applied to oily surfaces. Ambient 24 hour or accelerated thermal cure.

BONDiT™ Product	Uses	System	Key Properties	Applications
B-451 MSDS	• Potting • Paint • Coating • Primer • Adhesive	Flexible two-part epoxy, 2:1 mix ratio	• Flexible system for potting, painting, primer, and protective coating applications • Excellent adhesion to low surface energy plastics • High chemical resistance • Ease of use	High chemical resistance. Tough, flexible coating, primer and potting compound. Alternative to castable polyurethanes, particularly for electrical cable connector transducer termination. Excellent for electrical and electronic applications as protective encapsulate against very wide range of harsh environmental applications. Excellent for marine applications. Can be applied to oily surfaces. Will cure Underwater. Ambient 24 hour or accelerated thermal cure.
B-46 Data Sheet MSDS	• Potting • Sealant • Pressure sensitive adhesive	High flexibility two-part epoxy, 1:1 mix ratio	• Excellent adhesion to low surface energy plastics without primer or surface preparation	Very high flexibility—500% elongation, emphasizing high tack for un-abraded substrates and plastic films, including unetched Teflon. Excellent water and oil block for cable application. Ambient or thermal cure.
B-46CAT MSDS	• Potting • Sealant • Pressure sensitive adhesive	High flexibility *catalyzed* two-part epoxy, 1:1 mix ratio	• Excellent adhesion to low surface energy plastics without primer or surface preparation	Very high flexibility—500% elongation, emphasizing high tack for un-abraded substrates and plastic films, including unetched Teflon—with accelerated thermal cure: set time of 10 minutes at 200°F. Ambient cure 36 hours. Excellent for volume production in sealing cross linked polyethylene cable for high environmental resistance in automotive applications.
B-46TH MSDS	• Potting • Sealant • Pressure sensitive adhesive	High flexibility *thixotropic* two-part epoxy, 1:1 mix ratio	• Excellent adhesion to low surface energy plastics without primer or surface preparation	Very high flexibility—500% elongation, emphasizing high tack for un-abraded substrates and plastic films, including unetched Teflon. Excellent water and oil block for cable application. Ambient or thermal cure. May be catalyzed for fast set time.
B-46CC MSDS	• Caulking • Sealant • Adhesive	High flexibility two-part epoxy *paste*, 1:1 mix ratio	• Excellent adhesion to low surface energy plastics without primer or surface preparation	High flexibility—300% elongation, emphasizing high tack for un-abraded substrates and poorly prepared surfaces, including unetched Teflon. Excellent for water and oil sealing. Can be applied to oily surfaces. Ambient or thermal cure.
B-4682 MSDS	• Potting • Sealant • Adhesive	High flexibility two-part epoxy, 1:1 mix ratio	• Excellent adhesion to low surface energy plastics without primer or surface preparation	High flexibility—300% elongation, emphasizing high tack for un-abraded substrates and plastic films. Excellent water and oil block for cable applications. Ambient or thermal cure. May be catalyzed for fast set time.
B-4682TH MSDS	• Adhesive • Sealant • Potting	High flexibility *thixotropic* two-part epoxy, 1:1 mix ratio	• Excellent adhesion to low surface energy plastics without primer surface preparation	Very high flexibility—300% elongation, emphasizing high tack for un-abraded substrates and plastic films. Excellent water and oil block for cable applications. Ambient or thermal cure. May be catalyzed for fast set time.
B-4682CC MSDS	• Caulking • Sealant • Adhesive	High flexibility two-part epoxy *paste*, 1:1 mix ratio	• Excellent adhesion to low surface energy plastics without primer surface preparation	High flexibility—200% elongation, emphasizing high tack for un-abraded substrates and poorly prepared surfaces. Excellent water and oil sealing. Ambient or thermal cure. May be catalyzed for fast set time.
B-481 Data Sheet MSDS	• Potting • Paint • Coating • Adhesive	Semi-rigid two-part epoxy, 2:1 mix ratio	• High strength and toughness with excellent thermal stability to 400°F • Outstanding chemical resistance • Excellent electrical, and mechanical properties • Ease of use	Encapsulate sensitive instrumentation for chemical isolation, outstanding moisture resistance, ruggedness and flexibility. Suitable for clean room use and direct contact with semiconductors. Very easy to use and very clean two-part system. Superior for coating in marine applications and other harsh environments. Tough, high strength, chemically resistant non-blush clear coating with medium gloss finish. Bonds to most substrates. Can be applied to oily surfaces. Ambient 24 hour or accelerated thermal cure.

BONDiT™ Product	Uses	System	Key Properties	Applications
B-481TH MSDS	• Adhesive • Sealant • Conformal coating	Semi-rigid *thixotropic* two-part epoxy, 2:1 mix ratio	• High strength and toughness with excellent thermal stability to 400°F • Outstanding chemical resistance • Excellent electrical, and mechanical properties. • Ease of use	Bonds difficult-to-bond substrates and dissimilar materials including most metals, wood, plastics, rubber, urethane and concrete. Survives harsh environments, particularly moisture, harsh chemical, marine and sub sea. Exceptional performance as a universal adhesive for industrial applications. Can be applied to oily surfaces. Will cure underwater. Ambient 24 hour or accelerated thermal cure.
B-481CC MSDS	• Caulk • Sealant • Adhesive	Rigid two-part *trowelable* epoxy *paste*, 2:1 mix ratio	• Caulking and sealing dissimilar materials for very harsh environments • Excellent adhesion to most substrates • High-impact resistance	Caulks and seals plastics, metals, wood, rubber, urethane, concrete and aggregate. Survives harsh environments, particularly moisture and very harsh chemical environments. Superior for marine and automotive applications. Exceptional performance as a universal caulk. Can be applied to oily surfaces. Cures underwater. Ambient 24 hour or accelerated thermal cure.
B-4811 MSDS	• Potting • Paint coating • Primer • Adhesive	Semi-rigid two-part filled epoxy, 2:1 mix ratio	• Semi-rigid, high strength • A filled version of B-481 to further increase chemical resistance and electrical properties and to lower shrinkage • Ease of use	Encapsulate sensitive instrumentation for chemical isolation, outstanding moisture resistance and ruggedness. High chemical resistance and strength. Superior for coating, priming and encapsulation in marine applications and other very harsh environments Very easy to use and very clean two part system. .Bonds to most substrates. Ambient 24 hour or accelerated thermal cure. Off-white.
B-482 Data Sheet MSDS	• Potting • Paint • Coating • Adhesive	Semi-flexible two-part epoxy, 2:1 mix ratio	• Excellent balance of chemical, electrical, and mechanical properties • Ruggedized, semi-flexible system • Very clean system • Ease of use	Encapsulate sensitive instrumentation for chemical isolation, outstanding moisture resistance, ruggedness and flexibility. Suitable for clean room use and direct contact with semiconductors. Very easy to use and very clean two-part system. Superior for coating in marine applications and other harsh environments. Tough, chemically-resistant, non-blush clear coating with medium gloss finish. Bonds to most substrates. Ambient 24 hour or accelerated thermal cure.
B-482TH MSDS	• Adhesive • Sealant • Conformal coating	Semi-rigid two-part *thixotropic* epoxy, 2:1 mix ratio	• Excellent balance of chemical, electrical, and mechanical properties • Semi-flexible, tough system • Ease of use	Bonds difficult-to-bond substrates and dissimilar materials including most metals, wood, plastics, rubber, urethane and concrete. Survives harsh environments, particularly moisture, harsh chemical, marine and sub sea. Exceptional performance as a universal adhesive for industrial applications. Can be applied to oily surfaces. Will cure underwater. Ambient 24 hour or accelerated thermal cure.
B-482CC MSDS	• Caulk • Sealant • Adhesive	Semi-rigid two-part *trowelable* epoxy *paste*, 2:1 mix ratio	• Caulking and sealing dissimilar materials for very harsh environments. • Excellent adhesion to most substrates without primer • High impact resistance	Caulks and seals plastics, metals, wood, rubber, urethane, concrete and aggregate. Survives harsh environments, particularly moisture, very harsh chemical, marine and sub sea. Exceptional performance as a universal caulk for industrial applications. Can be applied to oily surfaces. Will cure underwater. Ambient 24 hour or accelerated thermal cure.

BONDiT™ Product	Uses	System	Key Properties	Applications
B-4821 MSDS	• Potting • Paint • Coating • Primer • Adhesive	Semi-flexible two-part filled epoxy, 2:1 mix ratio	• Excellent adhesive for low surface energy plastics • A filled version of B-482 to further increase chemical resistance and electrical properties and tolower shrinkage • High chemical resistance in a semi-flexible system • Used for potting, painting, primer and protective coating, applications • Ease of use	Very tough, flexible coating, primer and potting compound with high chemical resistance. Alternative to castable polyurethanes, particularly for electrical cable connector transducer termination. Excellent for electrical and electronic applications as protective encapsulate against very wide range of harsh environmental applications. Excellent for marine applications. Can be applied to oily surfaces. Will cure Underwater. Ambient 24 hour or accelerated thermal cure.
B-52 Data Sheet MSDS	• Adhesive	Semi-flexible two-part epoxy, 10:1 mix ratio	• Bonding dissimilar materials with high thermal expansion differential • Fast thermal cure, long pot life • Ease of use	Excellent for fast assembly of dissimilar materials with large differentials in thermal expansion, such as glass to acrylic. Bonds most plastics, metals, glass and ceramics. Cure 10 minutes at 170°F. Clear amber color.
B-521 Data Sheet MSDS	• Adhesive	Semi-flexible two-part *thixotropic* epoxy, 10:1 mix ratio	• ,Bonding dissimilar materials with high thermal expansion differential • Fast thermal cure, long pot life • Ease of use. Off-white color	Excellent for fast assembly of dissimilar materials with large differentials in thermal expansion, such as glass to acrylic. Bonds most plastics, metals, glass and ceramics. Cure 10 minutes at 170°F.
B-536 Data Sheet MSDS	• Adhesive • Potting	Semi-rigid two-part epoxy, 10:1 mix ratio	• Very high-strength, bonding of dissimilar materials • High moisture and solvent resistance • Fast ambient cure with good pot life • Ease of use.	Outstanding adhesive for very high strength potting, structural bonding and assembly applications. Bonds most plastics, metals, glass and ceramics. Good for electronics applications. High moisture resistance. Full cure 60 minutes at ambient or 10 minutes at 170°F or higher temperature for faster cure down to 15 sec.
B-536TH MSDS	• Adhesive	Semi-rigid two-part *thixotropic* epoxy, 10:1 mix ratio	• Very high-strength, bonding of dissimilar materials • High moisture and solvent resistance • Fast ambient cure with good pot life • Ease of use	Outstanding adhesive for very high strength structural bonding. Bonds to most plastics, metals, glass and ceramics. Good for electronics applications. High moisture resistance. Full cure 60 minutes at ambient or 10 minutes at 170°F or higher temperature for faster cure down to 15 sec. Good for electronics applications.
ELECTRICAL SPLICE KITS FOR HARSH ENVIRONMENTS				
P301-X Data Sheet	• Splicing	Electrical cable splice kit	• Standard and custom designs for all cable jacket materials, including polyethylene • Excellent for harsh environments	Permanent splicing of all cable jackets with very easy assembly. Excellent for field service applications. Suitable for all marine, offshore oil, and other harsh environmental applications.
P302-X	• Splicing • Cable termination	Electrical cable splice mold kit	• Standard and custom design mold kits for all cable jacket materials • Excellent for harsh environments	Permanent termination for electrical cables and transducers for filed installation for harsh environments.

OTHER KITS AND PRODUCTS				
Teflon Bonding Kit Data Sheet MSDS	• Flouro-polymer bonding	Etchant plus adhesive, potting or coating	• High bond strength • Works on many plastics • No handling issues • Easy to use	A clean and simple approach to bonding to flouropolymers and other difficult-to-bond plastics and produce a high bond strength. All BONDiT products work with the Etchant and the kit may be ordered with any of the BONDiT materials in the kit.