POLYMERIC SYSTEMS, INC.

QuikTitanium®

Product description

QuikTitanium is a hand-mixable, titanium-reinforced epoxy putty stick specifically formulated to bond and repair materials that will be exposed to high temperatures in industrial maintenance applications. Each stick contains pre-measured portions of base and activator throughout. No measuring or mixing tools are needed - just cut, mix and apply.

When mixed to a uniform color, the materials combine to form a polymer compound that can be molded into shapes, or used to build up, repair and patch almost anything. This industrial-strength product cures tough and hard and bonds tenaciously to metals. After 8 hours of cure, QuikTitanium can be machined, tapped, drilled, ground or filed.

Basic uses

QuikTitanium can be used to repair tanks, iron pipes, equipment, tools, stripped threads, blow holes, patterns, castings, molds and ductwork.

Benefits

- Solventless.
- Low odor.
- Long pot life.
- Service temperature -40 to 500°F (-40 to 260°C).

Performance Data*

Properties	Results	Test Method
Uncured Properties		
Work life at 75°F (24°C)	1.5 to 2 hours	
Non-volatile content	>99%	
Density	16.5 lb/gal. (1.90 g/cm³)	
Functional cure (lap shear tensile strength=200 psi)	8 hours	
Cure time to full cure at 70°F (21°C)	3 days	
Cured Mechanical Properties		
Shore D hardness		
at 75°F (24°C)	80	ASTM D2240
at 500°F (260°C)	48	
Lap shear tensile strength (steel to steel)		
Cured at 75°F (24°C) for 24 hrs	250 lbs (1.75 MPa)	ASTM D1002
Cured at 150°F (65°C) for 24 hrs	750 lbs (5.25 MPa)	
High-temp lap shear strength (steel to steel)		
Cured at 75°F (24°C) for 24 hrs + 500°F (260°C) for 1 hr.	250 lbs (1.75 MPa)	ASTM D1002
Compressive strength	8,000 psi (55 MPa)	ASTM D695
Shrinkage	<1%	ASTM D2566
Hi-temp weight loss (24 hours)	<1% at 400°F (204°C) <2% at 500°F (260°C)	
Tg by DSC	134°F (57°C)	
Temperature limits		
Continuous	-40 to 450°F (-40 to 232°C)	
Intermittent	-40 to 500°F (-40 to 260°C)	
Chemical resistance	Resistant to hydrocarbons, ketones, alcohols, esters, halocarbons, aqueous salt solutions, and dilute acids and bases	
Cured Electrical Properties		
Electrical resistance	30,000 megohms-cm	ASTM D257
Dielectric strength	300 volts/mil	ASTM D149

** Typical properties are for information only, not for purposes of specification. The data above represents product performance in ideal laboratory conditions. Individual users' experience may vary depending on application conditions.*

Application limitations

- Not intended for use in structural applications.

Color

Golden-brown titanium color.

Packaging

Packaged in a reusable clear plastic tube with a plastic friction top, 12 or 24 tubes per display carton, two display cartons in a master carton.

How to use

Surface preparation: To achieve optimum adhesion, surfaces must be clean and free of oil, grease, corrosion and dirt. Scuffing or sanding the surface prior to cleaning helps ensure a good bond.

Mixing: Wear impervious gloves when mixing or handling QuikTitanium. Twist or cut off required [redacted]gers, then mix by kneading [redacted]ixing is difficult, warm QuikTitanium to room temperature or slightly above. Apply to the repair surface within 1 hour of mixing. Force into any cracks or holes to be filled and strike off excess material before hardening begins, preferably with a tool moistened with clean water. Heating QuikTitanium or applying to warm surfaces will accelerate the cure.

For a smooth cured appearance, rub with water or damp cloth prior to hardening. After 2 hours the epoxy will form a tenacious bond. Curing at higher temperatures (150˚F/65˚C) will provide a stronger bond and faster hardening; lower temperatures will retard the cure. After 8 hours at room temperature QuikTitanium can be drilled, tapped, and sanded.

Shelf life: One year minimum from date of shipment when stored in original, unopened container in a dry area at temperatures below 75˚F (24˚C).

Health precautions

- Contains Epoxy Resin, Tri (dimetylaminomethyl) phenol, and Aliphatic Amines. Epoxies are skin/eye irritants and known sensitizers. Direct product contact may cause an allergic reaction in some individuals. Avoid skin/eye contact. Wear impermeable gloves when mixing or handling uncured product.
- Inhalation of dust may be harmful. Avoid inhalation of dust. Wear dust mask and protective eyewear when sanding cured product.
- Ingestion of product may be harmful. Avoid ingestion.
- KEEP OUT OF THE REACH OF CHILDREN.

For additional health and safety information, consult a Material Safety Data Sheet.

Availability and cost

Polymeric Systems, Inc., is a part of Whitford Worldwide. For more information, please contact Polymeric Systems or Whitford Ltd. at:

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