



Vibra-Tite® PB500 Structural Adhesive

January 2022

Product Description

Vibra-Tite PB500 is a 2-part methacrylate based adhesive that is specially formulated to bond low surface energy materials such as polypropylene, polyethylene and PTFE without additional surface preparation. The PB500 offers increased working time while also building ultimate strength faster than other adhesives in its class. The PB500 material offers high impact resistance and is capable of withstanding extreme temperature fluctuations.

Applications

Vibra-Tite PB500 is suitable for bonding combinations of the following substrates

Metals

- Aluminum
- Steel
- Coated Metals

Thermosets

- Fiberglass
- Polyurethane
- Liquid Molding Resins

Thermoplastics

- Acrylics
- ABS
- Polycarbonate
- PVC
- Vinyl's
- Polystyrenes
- Polyolefins
- PTFE
- PFOA

Ceramics

- Glass
- Zeolites

Features and Benefits

- No surface prep
- Excellent Strength
- Impact Resistant
- 100% Reactive
- Room Temperature Cure
- Easily Applied

Physical Properties

Uncured

Brookfield Viscosity 25°C Spindle 6, 2rpm(cPs):
 Resin.....75,000-125,000
 Activator35,000-65,000
 ColorTan
 Specific Gravity..... 1.06
 Mix Ratio:
 By Volume 1 to 1
 By Weight 1 to 1

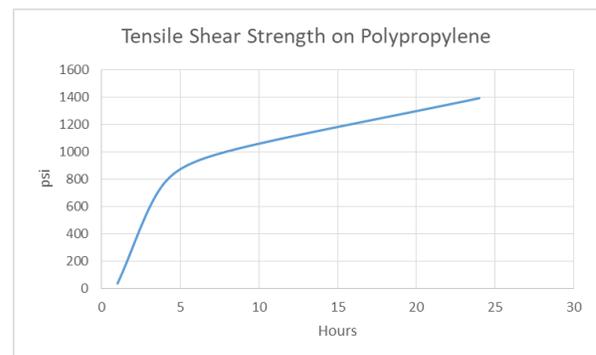
Cured

Work Time, Minutes 4-5 minutes
 Gap Fill, Inches: 0.1
 Temperature Range -60F - +250F

Tensile Shear Strength

24hr RT Tensile Shear (psi)			
Substrate	PB500	Competitor 1	Competitor 2
Polypropylene	1391	581	954
HDPE	1122	446	880
PTFE	362	94	138

24hr RT Tensile Shear Assembled at Max Open Time (psi)			
Substrate	PB500	Competitor 1	Competitor 2
Polypropylene	1300	153	188
HDPE	1125	402	756
PTFE	234	56	103





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Application and Handling Guidelines

The product is best used at temperatures between 65 °F and 80 °F. Temperatures below 65 °F will slow the cure speed of the material and viscosities will be higher. Temperatures above 80 °F will cause the material to cure faster and viscosities will be lower. For consistent dispensing maintain temperature in the above mentioned range.

For optimum bond strength and to insure maximum performance in the finished assembly, join parts together within the specified work time of the adhesive. Make sure the bond joint has uniform coverage and that a sufficient amount of adhesive is in the bond area. It is important to have the adhesive applied, parts aligned and positioned, within the established work times for the product. To ensure maximum performance in the finished assembly parts should remain undisturbed until the fixture time is reached.

Clean up is best before the adhesive has cured. Cleaners containing acetone or Citrus terpene provide the best results. On cured adhesive repeat use may be required.

Precautions

Keep containers closed when not in use. Avoid contact with skin and eyes. Harmful if swallowed. Refer to Material Safety Data Sheet for complete safety information.

Storage and Shelf Life

The shelf life of the Vibra-Tite PB500 is 6 months from date of manufacture. Shelf life is based on the products being stored properly at temperatures between 55 °F and 75 °F. Additionally, the shelf life can be extended to 9 months if stored in refrigeration from date of manufacture. Exposure to temperatures above 75 °F will reduce the shelf life of these materials.

Note

This data is furnished for information only and are believed to be reliable. We cannot assume responsibility for the results obtained by others over whose methods we have no control. It is recommended that the product be tested in the application for which it is to be used.

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