

Product Description

Vibra-TITE 538 High Strength Retaining Compound is a single part, medium viscosity, high strength anaerobic resin used for bonding rigid assemblies of all types. This material can be used effectively to increase the strength of most mechanical assemblies.

Typical Applications

Vibra-TITE 538 can be used in a broad variety of applications such as:

- Locking keys and splines
- Eliminating backlash in worn assemblies
- Locking bearings in place, preventing spin out
- Bonding rotor to shaft in low horsepower motors
- Locking bushings and sleeves in housings and on shafts
- Restoring the fit to worn assemblies or out-of-tolerance pans

Properties of Uncured Material

Chemical Type	Methacrylate
Cure Type	Anaerobic
Secondary Cure	Activator
Percent Solids	100
Color	Green
UV Fluorescent	Yes
Viscosity @25°C	2600-3500 ¹ cPs
Specific Gravity	1.08
Application	Retaining

1. Brookfield RVT Spindle 3, 20 rpm

Performance of Cured Material

Strength	High
Operating Range	-54°C to 149°C (-65°F-300°F)
Fixture Time (w/Primer)	<5 minutes
Fixture Time (w/out Primer)	10-60 min @ 23°C
Full Cure Time	24 hrs @ 23°C

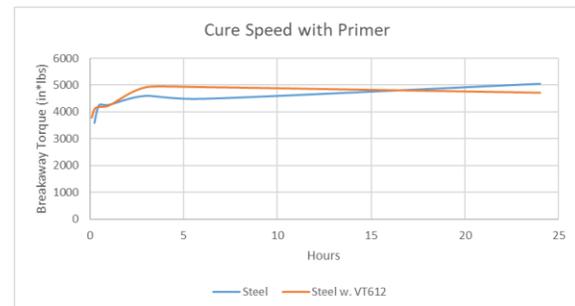
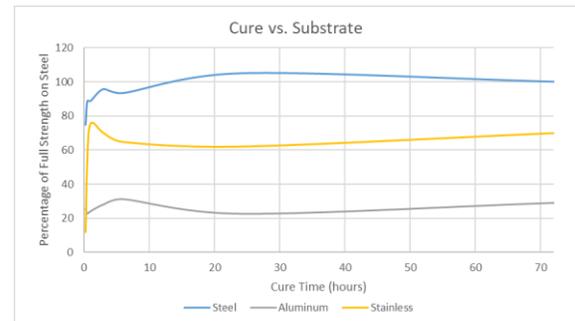
Performance of Cured Material (cont.)

Shear Strength Steel, 24 hr Cure @ 25°C	3,500 psi
Shear Strength Al, 24 hr Cure @ 25°C	1,000 psi

Static shear strength was measured on cylindrical parts with a 0.002” diametrical clearance.

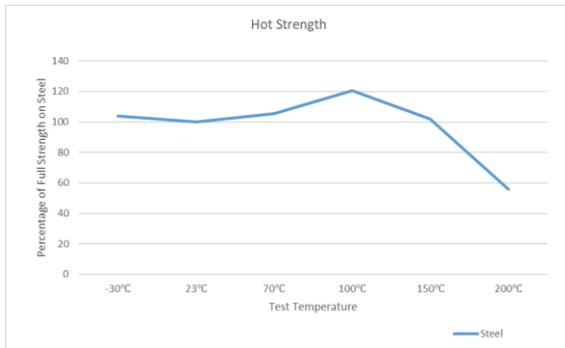
Cure Speed

The cure speed is dependent on temperature and substrate. The graph below shows compressive shear strength on various common finishes at 25°C, using ASTM 4562.



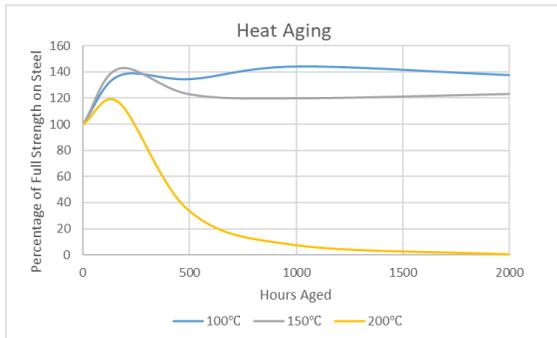
Hot Strength

Parts were cured for 24 hours then held at temperature for two hours. Compressive shear strength values were recorded for parts at temperature, using ASTM 4562 on steel substrates.



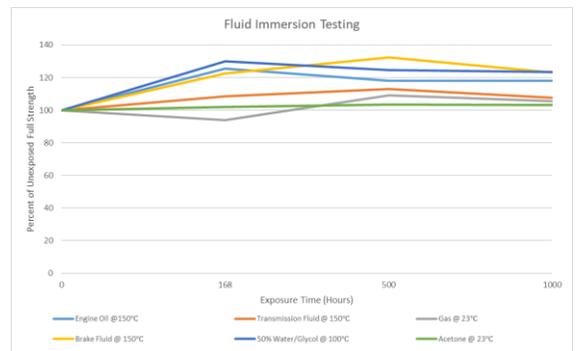
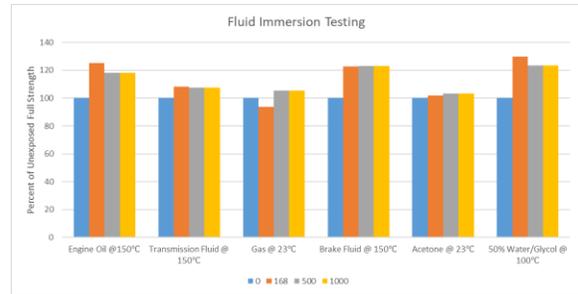
Heat Aging

Parts were allowed to cure for 24 hours then were aged at the reported temperatures. Compressive shear strength values were recorded at room temperature using ASTM 4562 on steel substrates.



Fluids Testing

Parts were allowed to cure for 24 hours then were submerged in the listed fluid(s) at the reported temperatures. Compressive shear strength values were recorded at room temperature, using ASTM 4562 on steel substrates.



Instructions for Use

For best results, ensure parts are clean, dry and free from oil and grease. Anaerobic adhesives cure in the presence of metal and the absence of oxygen. Residual adhesive outside of the bond area will remain liquid and is not indicative of product failure. For optimal performance, allow the material to cure for at least 24 hours prior to use when possible.

Compatible Primers

Primers such as Vibra-Tite Excel 611 (Primer N) or Excel 612 (Primer T) can be used to speed the fixture time of the adhesive. Fixture times can improve by as much as 50%. The use of primers can result in lower strength and performance should be tested after full cure.

General Information

Storage

Product should be stored in a cool and dry location at temperatures between 8°C to 21°C. Shelf life is 2 years from date of manufacture when stored at 72±8°F (22±4°C). Storing above this temperature will result in a lower shelf life.

Shelf life of this product is 6 months when storing in quantities ≥ 2 liters. Refrigerate the material or download the material into smaller containers to extend the shelf life.

Note

Using Vibra-TITE 538 is easy, the product is color coded green and once cured, it seals and vibration proofs the assembly, giving high compressive shears. The high strength of this material may require heat to disassemble.

Health & Safety in use

IRRITANT: Contains Methacrylate monomers which may irritate eyes, respiratory organs and skin. In case of contact with the skin, wash immediately with plenty of water.