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SS-GRT Green Retaining Compound

Product Description

SS-GRT, Green Retaining Compound is an adhesive that will permanently secure bearings, bushings and cylindrical parts into housings or onto shafts in sleeve joints. They achieve maximum load transmission capability and uniform stress distribution. Applied as light paste, they form very close contact between mating ferrous metal, stainless steel, Nickel, Titanium and other hard metal surfaces. Green Retaining Compound fills the inner gaps of the spaces between the metal asperities between the substrates. Upon application of friction in a press fit, they cure to form a strong precision assembly.

Product Features

- ◆ **Very fast cure speed**
- ◆ **Very high bond strength**
- ◆ **Permanent bonds**
- ◆ **Very high temperature resistance**
- ◆ **High-strength, work hardened bonds are formed which can exceed the strength of the metal.**

Color: Green

Typical Applications

- **Permanent bearing retainer**
- **Preventing spin out**
- **Retaining rotor to shafts**
- **Retaining bushings**
- **Sleeves in housings and on shafts**
- **Augmenting press fits**

How to choose the right retaining compound

Gap size between parts

Typically, low viscosity retaining compounds (125 to 2,000 mPa•s) are used for gaps up to 0.15 mm. For gaps greater than 0.15 mm up to 0.5 mm, retaining compounds with higher viscosities (>2,000 mPa•s), light pastes should be used. In applications where gaps are >1.0 mm, SS-GRT Green Retaining Compounds are not recommended.

Very high temperature resistance

Most retaining materials will lose strength after 200C. SS-GRT is capable of withstanding temperatures up to 1000°C without loss of strength.

Very high bond strength

SS-GRT is very high-strength and only recommended for applications that require a permanent bond. If parts will need to be taken apart for maintenance, it is better to use other low to medium strength products where they are plastic like exhibiting lower strength that can be disassembled. The Green Retaining Compound creates a bond so strong that cannot be disassembled without damage to the parts.

TYPICAL PROPERTIES OF CURED MATERIAL

Physical Properties:

Coefficient of Thermal Expansion, ISO 11359-2	100×10 ⁻⁶
Coefficient of Thermal Conductivity, ISO 8302	0.1 W/(m·K)
Specific Heat, b	0.3 kJ/(kg·K)

TYPICAL PERFORMANCE OF CURED MATERIAL

Adhesive Properties

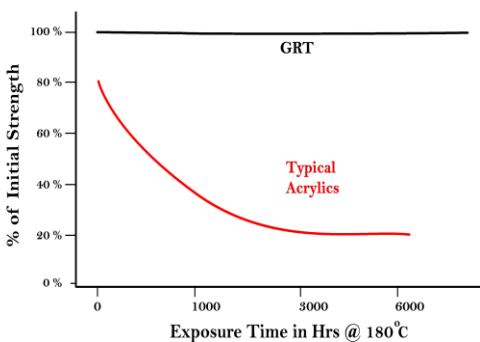
Cured for 30 minutes @ 22 °C,	
Compressive Shear Strength, ISO 10123:	
Steel pins and collars	≥3,190 psi
Breakaway Torque, MIL-S-46163	≥530 lb. in.
Prevail Torque, MIL-S-46163	≥530 lb.in.
Breakloose Torque,	≥440 lb.in
Pre-torqued to 5 N·m ISO 10964,	
Max. Prevail Torque, Pre-torqued to 5 N·m ISO 10964	≥530 lb.in.

TYPICAL ENVIRONMENTAL RESISTANCE

Cured for 1 week @ 22 °C
Compressive Shear Strength, ISO 10123:
Steel pins and collars

Hot Strength

Heat Aging at temperature indicated and tested @ 22 °C



Chemical/Solvent Resistance

Unlike acrylics, the bonds formed by GRT are impermeable to solvents, oils or other chemicals. The chart below displays this.

Fluid resistance chart % retention of initial strength

Environment	1000 h	3000 h	5000 h
Motor oil (MIL-L-46152)	100	100	100
Unleaded gasoline	100	100	100
Brake fluid	100	100	100
Water/glycol 50/50	100	100	100
Ethanol	100	100	100
Acetone	100	100	100

GENERAL INFORMATION

This product is not recommended for use in pure oxygen and/or oxygen rich systems, with strong bases, near sparks or flames and should not be selected as a sealant for chlorine or other strong oxidizing materials. For safe handling information on this product, consult the Material Safety Data Sheet (MSDS).

EXCLUSIONS

As the product is activated by friction, SS-GRT is not recommended for use on aluminum, copper, zinc, tin or other soft metals or alloys.

Where washing systems are used to clean the surfaces before bonding, it is important to check for compatibility of the washing solution with the adhesive.

Directions for use:

For Assembly

1. For best results, clean all surfaces (external and internal) with a non-aqueous cleaning solvent and allow to dry.

3. **For Slip Fitted Assemblies**, apply adhesive around the leading edge of the pin and the inside of the collar and use a rotating motion during assembly to ensure good coverage.

4. **For Press Fitted Assemblies**, apply adhesive thoroughly to both bond surfaces and assemble at high press on rates.

Optimal Storage: 0 °C to 21 °C in the unopened container in a dry location. Storage greater than 28 °C can adversely affect product properties. Material removed from containers may be contaminated during use. Do not return product to the original container. We cannot assume responsibility for product which has been contaminated or stored under conditions other than those previously indicated. If additional information is required, please contact your local Technical Service Center or Customer Service Representative.

Note

The data contained herein are 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 the user's responsibility to determine suitability for the user's purpose of any production methods mentioned herein and to adopt such precautions as may be advisable for the protection of property and of persons against any hazards that may be involved in the handling and use thereof.

Handling and safety

For maximum shelf life, keep containers sealed when not in use. Keep out of the reach of children. Uncured sealant irritates eyes and skin. Refer to MSDS.

Shelf-life

Sealed containers are guaranteed for 1 year from the ship date when stored in a cool dry area below 65 F.

Limited warranty

All recommendations, statements and technical data herein are based on tests we believe to be reliable and correct, but accuracy and completeness of said tests are not guaranteed and are not to be construed as warranty, either expressed or applied. User shall rely on his own information and tests to determine suitability of the product for the intended use, and the user assumes all risk and liability resulting from the use of this product. Manufacturer's sole responsibility shall be to replace that portion of product of the manufacturer proves to be defective. Manufacturer shall not be liable to the buyer or any third party for injury, loss or damage directly or indirectly resulting from the use of, or inability to use, the product. Recommendations or statements other than those contained in a written agreement signed by an officer of the manufacturer shall not be binding by the manufacturer.

This product has not been tested for, and is therefore not recommended for, uses for which prolonged contact with mucous membranes, abraded skin, or blood is intended; or for uses which implantation within the human body is intended.

**** Customized versions available upon request ****