High Strength Retainer

Technical Data Sheet

Product Description:

High Strength Retainer is a fast curing, high strength anaerobic retaining compound for cylindrical fitting parts particularly where bond gaps can approach 0.25mm (0.01”).

High Strength Retainer is a single component anaerobic adhesive, which develops high strength rapidly when confined in the absence of air between close fitting metal surfaces.

Applications:

- Ideal to fill gaps up to 0.25 mm (0.01”) diameter clearance.
- Maximum strength at room temperature.
- Used for locking bushings and sleeves into housings and on shafts.
- Excellent retaining, sealing and thread locking compound.

Adhesive Properties:

Composition:	Urethane Methacrylate
Color:	Green
Viscosity: Brookfield RVT Spindle 4 @ 20 rpm	2,500 cps at 25 ^{0}C
Specific Gravity:	1.09
Maximum Diameter of Thread/Gap Filling:	0.25 mm
Flash Point:	> 93 ^{0}C
Solvent Content:	None
Shelf Life:	1 year

Curing Properties:

Handling Cure Time:	5 minutes
Functional Cure Time:	1-3 hours
Full Cure Time:	24 hours
Compressive Shear Strength: (ISO 10123)	
After 24 hours at 22 ^{0}C	
Steel Pins & Collars	> 25 N/mm^2 > 4,300 psi
After 30 minutes at 22 ^{0}C	
Steel Pins & Collars	15 - 17 N/mm^2 2,250 psi
Temperature Range	-55 to 150 ^{0}C

Physical Properties:

Coefficient of Thermal Expansion, ASTM D 696, K-1	80×10^{-6}
Coefficient of Thermal Conductivity, ASTM C 177,W/(m·K)	0.10
Specific Heat, kJ/(kg·K)	0.30

Chemical Resistance:

Chemical	**Temp.**	**% Initial Strength Retained**	
		500 hours	1000 hours
Acetone	22 ^{0}C	100	100
Ethanol	22 ^{0}C	100	100
Motor Oil	125 ^{0}C	100	100
Gasoline	22 ^{0}C	100	100
Brake Fluid	22 ^{0}C	100	100
Water/Glycol	87 ^{0}C	100	95

Directions for use:

For Assembly

- For best results, clean all surfaces (external and internal) with a cleaning solvent and allow solvent to evaporate.
- If the material is an inactive metal or the cure speed is too slow, spray with a suitable Activator and allow to dry.
- **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.
- **For Press Fitted Assemblies**, apply adhesive thoroughly to both bond surfaces and assemble at high press on rates.
- **For Shrink Fitted Assemblies** the adhesive should be coated onto the pin, the collar should then be heated to create sufficient clearance for free assembly.
- Parts should not be disturbed until sufficient handling strength is achieved.

For Disassembly

- Apply localized heat to the assembly to approximately 250°C. Disassemble while hot.

Storage:

Anaerobic adhesives shall be ideally stored in a cool, dry place in unopened containers at a room temperature between 5°C and 30°C.