

Technical Data Sheet

Product Description:

LS4 is a fast curing, high strength anaerobic retaining compound for cylindrical fitting parts particularly where bond gaps can approach 0.25mm (0.01”).

LS4 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: | 2,500 | cps at 25 °C |
| | Brookfield RVT | |
| | Spindle 4 @ 20 rpm | |
| Specific Gravity: | 1.09 | |
| Maximum Diameter of Thread/Gap Filling: | 0.25 mm | |
| Flash Point: | > | 93 °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 °C | |
| Steel Pins & Collars | > 25 N/mm ² |
| | > 4,300 psi |
| After 30 minutes at 22 °C | |
| Steel Pins & Collars | 15 - 17 N/mm ² |
| 2,250 | psi |
| Temperature Range | -55 to 150 °C |

Physical Properties:

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

Chemical Resistance:

| Chemical | Temp. % | Initial Strength Retained | |
|--------------|---------|---------------------------|-------|
| | | hours 1000 | hours |
| Acetone | 22 | 100 | 100 |
| Ethanol | 22 | 100 | 100 |
| Motor Oil | 125 | 100 | 100 |
| Gasoline | 22 | 100 | 100 |
| Brake Fluid | 22 | 100 | 100 |
| Water/Glycol | 87 | 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.