



ChemTools 8680 Retaining Compound

ChemTools 8680 is a fast curing; high strength anaerobic retaining compound for cylindrical joints.

ChemTools 8680 retaining compound is a single component anaerobic adhesive, which develops high strength rapidly when confined in the absence of air between close fitting metal surfaces and prevents loosening and leakage from vibration and shock.

Applications:

- Ideal to fill gaps up to 0.15mm diameter clearance.
- Retaining Sleeves, Pulleys, Gears, Rotors, and Fans on shafts.
- Mounting sleeves, Securing bushings, bearings and plugs in housings.
- Excellent retaining, sealing and thread locking compound.

Adhesive Properties:

Composition:	Methacrylate Esters
Color:	Green
Viscosity:	1,200 cps at 25°C
Brookfield RVT Spindle 3 @ 20 rpm	
Specific Gravity:	1.11
Maximum Diameter of Thread/Gap Filling:	0.15 mm
Flash Point:	>93°C
Solvent Content:	None
Shelf Life:	1 year

Curing Properties:

Handling Cure Time:	10 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 >	29 N/mm ² >4,000 psi
After 30 minutes at 22°C	
Steel Pins & Collars	>16 N/mm ² 2,100 psi
Temperature Range	-55 to 150°C

Physical Properties:

Coefficient of Thermal Expansion: ASTM D 696, K ⁻¹	80×10 ⁻⁶
Coefficient of Thermal Conductivity:	0.10



ASTM C 177,W/(m·K)
Specific Heat, kJ/(kg·K) 0.30

Chemical Resistance:

Chemical	Temperature	% Initial Strength Retained	
		500 hours	1000 hours
Acetone	22°C	100	95
Ethanol	22°C	100	100
Motor Oil	125°C	100	100
Petrol	22°C	100	100
Brake Fluid	22°C	100	100
Water/Glycol	87°C	100	98

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 Activator 8071 or 8049 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 localised 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 7°C to 28°C. Please do not return any unused material to its original container.

PRECAUTIONS: This product and the auxiliary materials normally combined with it are capable of producing adverse health effects ranging from minor skin irritation to serious systemic effects. None of these materials should be used, stored, or transported until the handling precautions and recommendations as stated in the Material Safety Data Sheets (MSDS) for this and all other products being used are understood by all persons who will work with the material.

Warranty: All products purchased from or supplied by ChemTools are subject to terms and conditions set out in the contract. ChemTools warrants only that its product will meet those specifications designated as such herein or in other publications. All other information supplied by ChemTools is considered accurate but are furnished upon the express condition the customer shall make its own assessment to determine the product's suitability for a particular purpose. ChemTools makes no other warranty, either express or implied, including those regarding such other information, the data upon which the same is based, or the results to be obtained from the use thereof; that any product shall be merchantable or fit for any particular purpose; or that the use of such other information or product will not infringe any patent.