



## A NEW FORCE IN CHEMICAL MANUFACTURING

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# TECHNICAL DATA SHEET

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## PRODUCT NAME

8680 Fast Curing, High Strength Anaerobic Retaining Compound

## PRODUCT RANGE

Part Number	Available Size
8680-10	10 ml
8680-50	50 ml
8680-250	250 ml



Refer to MSDS for product safety guidelines

## 8680 Fast Curing, High Strength Anaerobic Retaining Compound

Chemtools® 8680 is a fast curing high strength anaerobic retaining compound for cylindrical joints. It 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 for filling gaps up to 0.15 mm 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 Ester
Appearance	Green
Viscosity @ 25°C (Brookfield RVT, Spindle 3 @ 20 rpm)	1,200 cps
Specific Gravity	1.11
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 and Collars)	29 N/mm <sup>2</sup> (4,000 psi)
After 30 minutes at 22°C (Steel Pins and Collars)	> 16 N/mm <sup>2</sup> (> 2,100 psi)
Temperature Range	-55 to 150°C

**PHYSICAL PROPERTIES:**

Coefficient of Thermal Conductivity, ASTM C177, W/m.K	0.10
Coefficient of Thermal Expansion, ASTM D696, K <sup>-1</sup>	80 x 10 <sup>-6</sup>
Specific Heat, kJ/kg.K	0.30

**CHEMICAL RESISTANCE PROPERTIES:**

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

**APPLICATION INSTRUCTIONS:**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 drying.
- 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 is 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:**

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