



## A NEW FORCE IN CHEMICAL MANUFACTURING

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# TECHNICAL DATA SHEET

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## PRODUCT NAME

8510 High Temperature Flange Gasket Sealant

## PRODUCT RANGE

| Part Number | Available Size |
|-------------|----------------|
| 8510-50     | 50 ml          |
| 8510-250    | 250 ml         |



Refer to MSDS for product safety guidelines

## 8510 High Temperature Flange Gasket Sealant

Chemtools® 8510 is an anaerobic gasket sealant, which develops medium strength in a short time. The product cures rapidly in the absence of air between close fitting metal surfaces. It is a high temperature resistant gasketing sealant with excellent chemical resistance.

### APPLICATIONS:

- Used as a form-in-place gasket on flanged connections.
- Typical uses are engine casings and gearbox.
- Thixotropic nature reduces the migration of liquid product after application.

### ADHESIVE PROPERTIES:

|   |                       |
|---|-----------------------|
| Composition   | Dimethacrylate Ester  |
| Appearance  | Red                   |
| Viscosity @ 25°C (Brookfield RVT, Spindle 7 @ 20 rpm) | 188,000 - 500,000 cps |
| Specific Gravity                                      | 1.10                  |
| Flash Point   | > 93°C                |
| Solvent Content                                       | None                  |

### CURING PROPERTIES:

|   |                                   |
|---|-----------------------------------|
| Handling Cure Time (Primed Surface)                     | 30 minutes - 4 hours              |
| Functional Cure Time (Unprimed Surface)                 | 2 - 8 hours                       |
| Temperature Range                                       | -50 to 80°C                       |
| Lap Shear Strength - ISO 4587 (Steel, Grit Blasted)     | 5 N/mm <sup>2</sup> (725 psi)     |
| Tensile Shear Strength - ISO 6922 (Steel, Grit Blasted) | 7.5 N/mm <sup>2</sup> (1,085 psi) |

### Compressive Shear Strength - ISO 10123

|   |                                   |
|---|-----------------------------------|
| After 24 hours at 22°C (Steel Pins and Collars) | 7.5 N/mm <sup>2</sup> (1,085 psi) |
|---|-----------------------------------|

### PHYSICAL PROPERTIES:

|   |      |
|---|------|
| Coefficient of Thermal Conductivity, ASTM C177, W/m.K | 0.10 |
|---|------|

Coefficient of Thermal Expansion, ASTM D696, K<sup>-1</sup>  
Specific Heat, kJ/kg.K

80 x 10<sup>-6</sup>  
0.30

**CHEMICAL RESISTANCE PROPERTIES:**

| Chemical     | Temperature | <u>% Initial Strength Retained</u> |                   |
|--------------|-------------|------------------------------------|-------------------|
|              |             | <i>500 hours</i>                   | <i>1000 hours</i> |
| Acetone      | 22°C        | 100                                | 95                |
| Ethanol      | 22°C        | 90                                 | 85                |
| Motor Oil    | 125°C       | 100                                | 100               |
| Petrol       | 22°C        | 75                                 | 75                |
| Brake Fluid  | 22°C        | 95                                 | 95                |
| Water/Glycol | 87°C        | 110                                | 110               |

**APPLICATION INSTRUCTIONS:**

- For best results, clean all surfaces (external and internal) with a cleaning solvent and allow the 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.
- Apply manually as a continuous bead or by screen-printing to one surface of the flange.
- Low pressure can be used when testing to confirm a complete seal immediately after assembly.
- Flanges should be tightened as soon as possible after assembly to avoid shimming.

**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.

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