



## Loctite 5800

Laboratory Data Sheet, October 2011

### PRODUCT DESCRIPTION

LOCTITE 5800 provides the following product characteristic:

<b>Technology</b>	Acrylic
Chemical Type	Dimethacrylate ester
Apperance (uncured)	Red viscous liquid <sup>LMS</sup>
Flourescence	Positive under UV light <sup>LMS</sup>
Components	One Component - requires no mixing
Viscosity	High
<b>Cure</b>	Anaerobic
Secondary Cure	Activator
<b>Application</b>	Flange sealing
Strength	Medium

LOCTITE® 5800 is a single component, medium strength, anaerobic sealant which cures when confined in the absence of air between close fitting metal surfaces. Typical applications include sealing close fitting joints between rigid metal faces and flanges. The product provides resistance to low pressures immediately after assembly of flanges. Typically used as a form-in-place gasket on rigid flanged connections, e.g. gearbox and engine casings, etc.

LOCTITE® 5800 is part of the Health & Safety anaerobic range. The product is label free. There are no risk or safety phrases associated with either the formulation or its ingredients.

### TYPICAL PROPERTIES OF UNCURED MATERIAL

Specific Gravity @ 25 °C	1.1
Flash Point - See MSDS	
Viscosity, Haake – RV1, 25°C, mPa·s (cP): C35/2° Ti, 20s <sup>-1</sup>	11,000 to 32,000 <sup>LMS</sup>
Viscosity, Brookfield - HBT, 25 °C, mPa·s (cP): Spindle TC, speed 5.0 rpm, Helipath	150,000

### Instant Sealing Capability

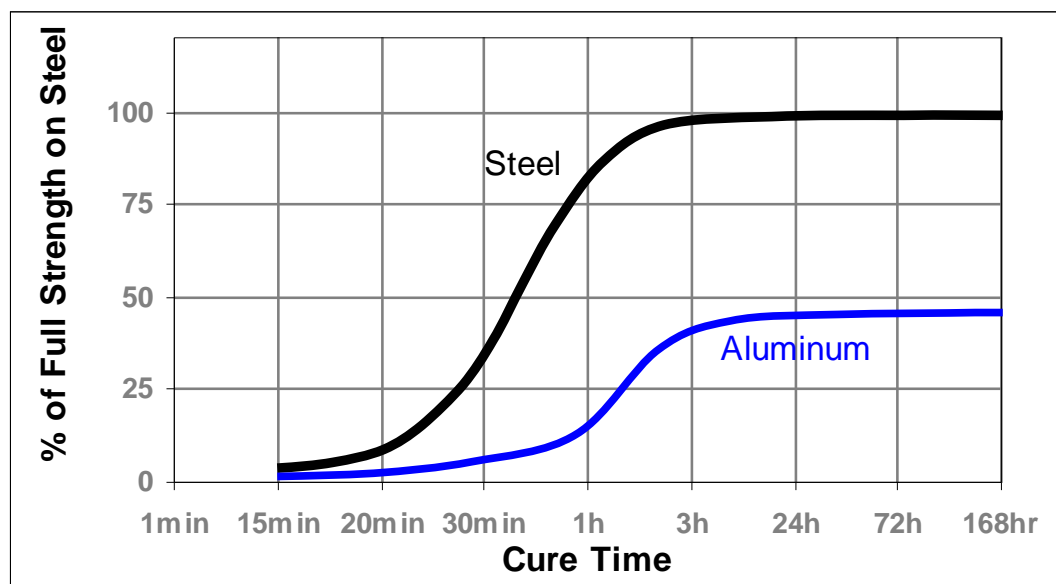
Anaerobic sealants have the ability to resist low on-line test pressures while uncured. This test was performed with uncured product immediately after assembly of an annular polycarbonate sealing surface with an internal diameter of 50 mm and an external diameter of 70 mm.

Pressure Resistance, MPa:	
Induced Gap 0.05 mm	0.08
Induced Gap 0.125 mm	0.03
Induced Gap 0.25 mm	0.01

## TYPICAL CURING PERFORMANCE

### Cure Speed vs. Substrate

The rate of cure will depend on the substrate used. The graph below shows the shear strength developed with time on grit blasted steel lap shears compared to different materials and tested according to ISO 4587.



### Tensile Strength vs. Bond Gap

The final strength will depend on the bondline gap. The following table shows tensile shear strength developed after 72 hours cure on grit blasted steel lap shears at different controlled gaps and tested according to ISO 4587.

Bondline gap (mm)	% of Full Strength on Steel
0	100
0.125	90
0.25	60

## TYPICAL PERFORMANCE OF CURED MATERIAL

### Adhesive Properties

Cured for 24 hours @ 22 °C

Lap Shear Strength, ISO 4587:  
Steel (grit blasted) N/mm<sup>2</sup> 11  
(≥5<sup>LMS</sup>)

Lap Shear Strength, ISO 4587:  
Aluminium N/mm<sup>2</sup> 5

## TYPICAL ENVIRONMENTAL RESISTANCE

The following tests refer to the effect of environment on strength.

This is not a measure of sealing performance.

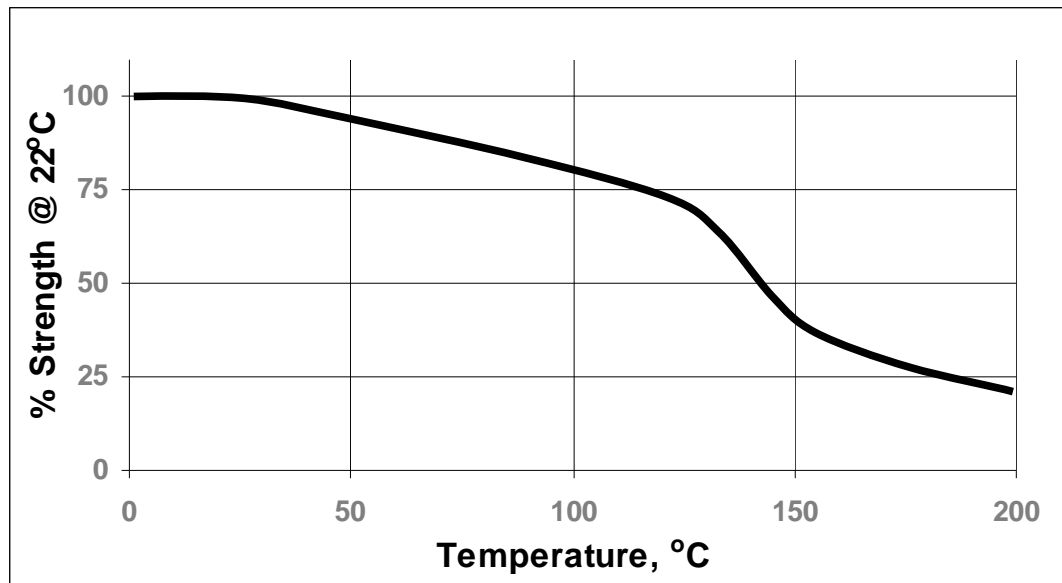
Cured for 1 week @ 22 °C.

Lap Shear Strength, ISO 4587:

Steel (grit blasted)

### Hot Strength

Tested at temperature



### Heat Aging

Aged at temperature indicated and tested @ 22 °C

