BYLLOC 1518

Product Description

BYLLOC 1518 is designed for sealing, the product is a single component anaerobic, acrylic based product. The product cures when confined in the absence of air between close fitting metal surfaces. The product provides resistance to low pressures immediately after assembly of flanges. It seals close fitting joints between flanges and fixed metal faces and will flex with minor movement from the flange.

BYLLOC 1518 offers the following characteristics:

Technology	Acrylic
Appearance (uncured)	Red
Chemical Form	Dimethacrylate ester
Fluorescence	Positive under UV
Cure	Anaerobic
Cure Benefit	Room temperature cure
Components	Single – requires no mixing
Viscosity	High thixotropic
Application	Sealing

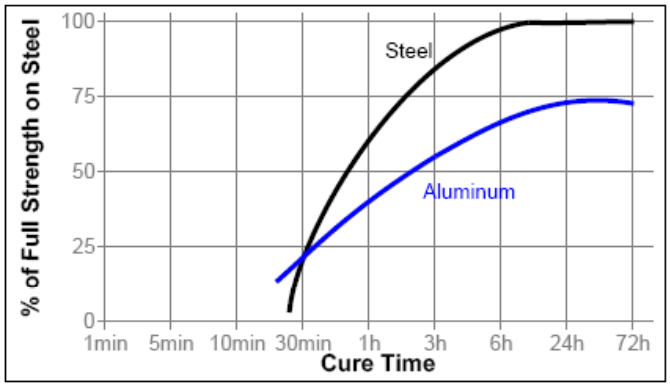
BYLLOC 1518 is used as a form-in-place gasket for applications on rigid flanged connections for example engine casings and gearboxes.

Properties of Uncured Material

	Typical Value
Specific Gravity @ 25°C	1.13
Viscosity @ 25°C	3,000,000-4,500,000 mPas
Flash Point	See MSDS
Operating temp °C	-54°C-150°C
Sealing Time	1-2 hours

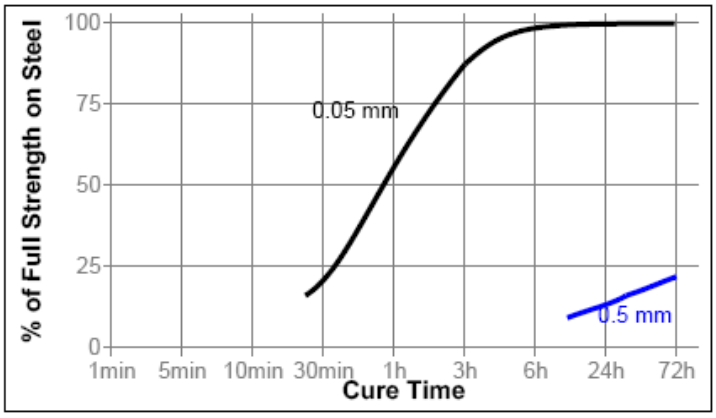
Cure speed vs. substrate

The rate of cure is dependant on 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.



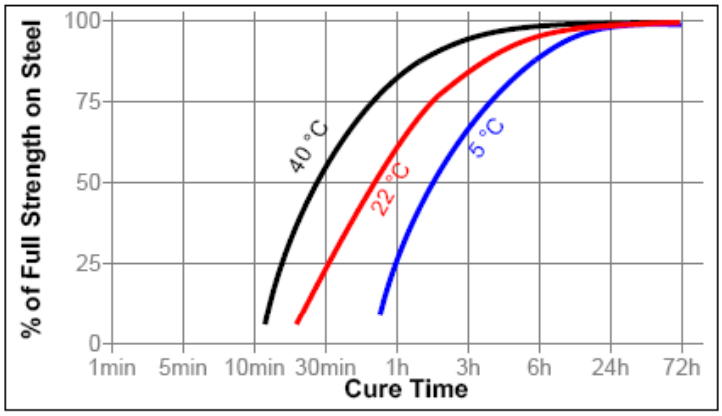
Cure speed vs. bond gap

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



Cure speed vs. temperature

The rate of cure is dependent on the ambient temperature. The graph below shows the breakaway strength developed with time at different temperatures on grit blasted steel lap shears and tested according to ISO 4587.



Cure speed vs. activator

Where the cure speed is unacceptably long or large gaps are present. An activator can be applied to the surface which will improve cure speed.

Typical performance of cured material

(After 24 hr at 20-25°C)

	Typical Value
Lap shear strength steel (grit blasted) ISO 4587	7.5Nm
Tensile strength steel pin (grit blasted) ISO 6922	8.5Nm

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Sealing Capability

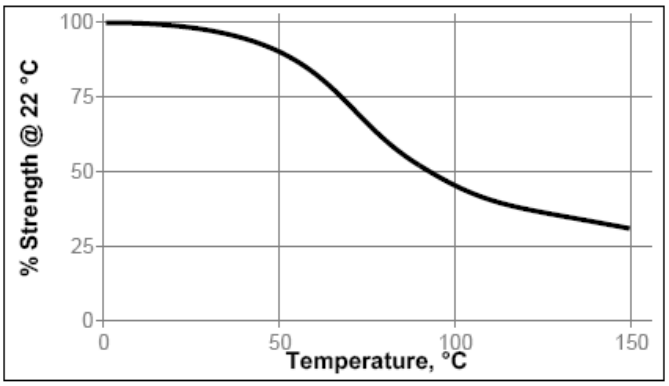
Tested up to 1.3MPa for leakage (immersed in water for 1 minute) using a shaped gasket 70 mm external & 50 mm inner.

Sealed to maximum induced gap,mm
Aluminium, Mild Steel 0.25

Typical heat resistance

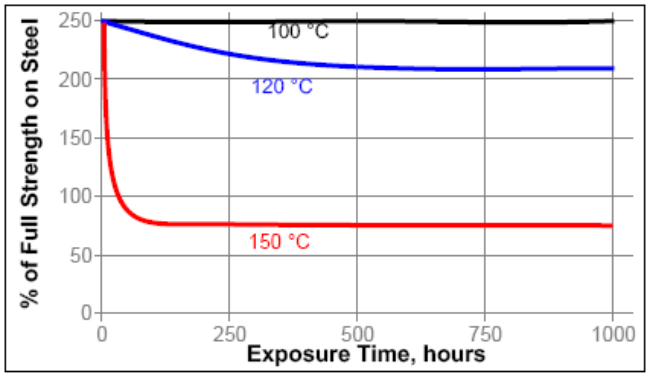
Hot Strength

Tested at temperature



Heat aging

Aged at temperature indicated and tested at 22°C



Chemical/Solvent Resistance

Aged under conditions indicated and tested at 22°C.

		% of initial strength		
Environment	**°C**	**100 h**	**500 h**	**1000 h**
Motor oil (MIL-L-46152)	125	100	160	140
Gasoline	22	60	60	55
Water/Glycol 50/50	87	100	100	90

General information

This product is not recommended for use in pure oxygen and/or oxygen rich systems and should not be use with chlorine or other strong oxidising materials.
For information on the safe handling of this product, consult the Material Safety Data Sheet, (MSDS).

Where washing systems are used to clean the surfaces before bonding, it is important to check the compatibility of the washing solution with the adhesive. In some cases these solutions can affect the cure and performance of the adhesive. This product is not recommended for use on certain plastics.

Directions for use

1. For optimum performance surfaces should be clean and free of grease.
2. The product is designed for close fitting flanged parts with gaps up to 0.25 mm.
3. Apply manually by screen printing to one surface of the flange or as a continuous bead.
4. Low pressure <0.05 MPa can be used to confirm a complete seal after assembly and before curing..
5. To avoid shimming flanges should be tightened as soon as possible after assembly.

Precaution

1. Use proper ventilation, avoid contact with skin and eyes.
2. If contact with skin occurs, rinse with warm water or dissolve gradually with appropriate debonder.
3. Do not try to remove forcibly.
4. If adhesive gets into eye, keep eye open and rinse thoroughly. Seek medical attention immediately.
5. Keep well out of reach of children.

Storage

Keep adhesive in a cool, dry place optimal storage 8°C-21°C, is recommended unless otherwise labelled. To prevent contamination of unused material, do not return any product to its original container.

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