

Product Description

BYLLOC 407 is designed for the sealing and locking of metal fittings and pipes. The product is a single component anaerobic, medium strength thixotropic, acrylic based product. The product cures when confined in the absence of air between close fitting metal surfaces and prevents leakage and loosening from vibration and shock.

BYLLOC 407 offers the following characteristics:

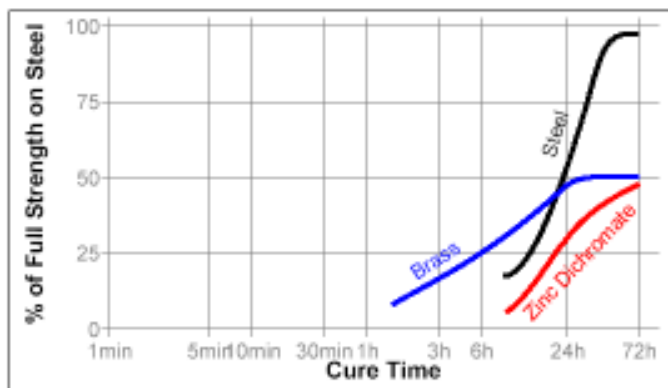
Technology	Acrylic
Appearance (uncured)	White
Chemical Form	Dimethacrylate ester
Cure	Anaerobic
Secondary cure	Activator
Components	Single – requires no mixing
Viscosity	Thixotropic, high
Strength	Medium
Application	Thread sealing

Properties of Uncured Material

	Typical Value
Specific Gravity @ 25°C	1.25
Viscosity @ 25°C	28800 - 77000mPas
Flash Point	See MSDS

Cure speed vs. substrate

The rate of cure is dependant on substrate used. The graph below shows the breakaway strength developed with time on M10 steel bolts and nuts compared to different materials and tested according to ISO 10964.

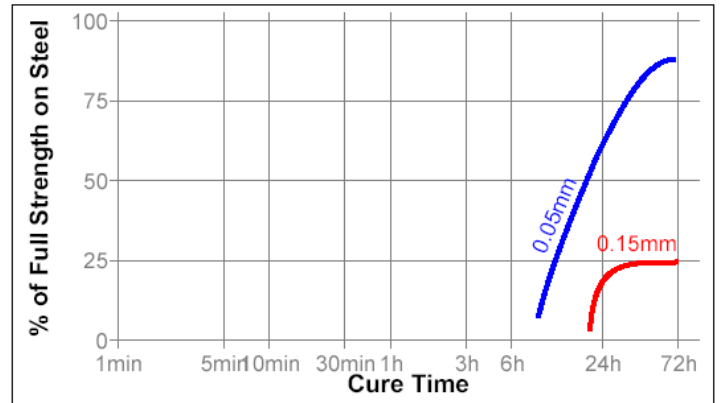


Cure speed vs. activator

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.

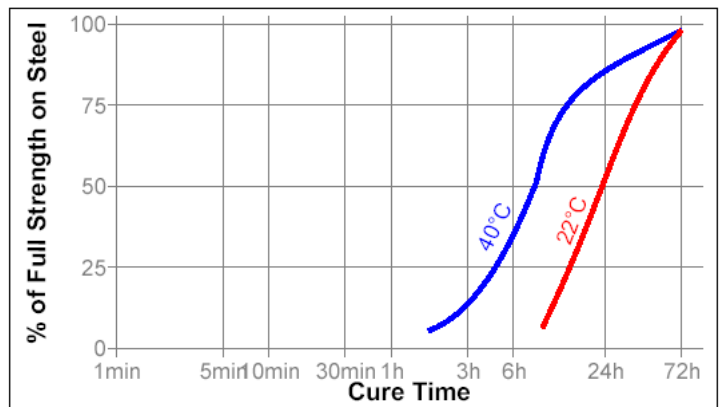
Cure speed vs. bond gap

The rate of cure will depend on the bond gap. Threaded fasteners gap size is dependent on thread type and quality. The graph below shows shear strength developed with time on steel collars and pins at different controlled gaps and tested according to ISO 10123.



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 M10 steel bolts and nuts and tested according to ISO 10964.



Typical performance of cured material

Physical Properties	Typical Value
Coefficient of Thermal Expansion	80×10^{-6}
Coefficient of Thermal Conductivity	0.10

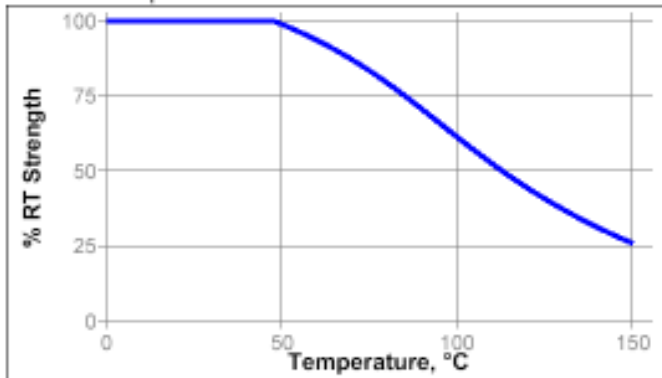
(After 24 hr at 20-25°C) on M10 steel nuts & bolts)

Adhesive Properties	Typical Value
Breakaway Torque M10 steel bolts & nuts ISO 10964	7Nm
Prevail Torque M10 steel bolts & nuts ISO 10964	3Nm

Typical heat resistance

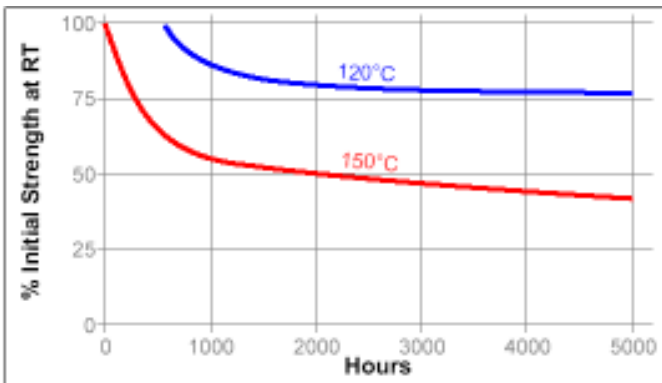
Hot Strength

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.

Environment	°C	% of initial strength		
		100 h	500 h	1000 h
Motor oil (MIL-L-46152)	125	75	70	70
Leaded Petrol	22	95	95	95
Brake fluid	22	100	100	100
Water/Glycol 50/50	22	90	80	55
Ethanol	22	90	90	90
Acetone	22	85	85	75

General information

This product is not recommended for use in pure oxygen and/or oxygen rich systems and should not be used 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 (internal and external).
2. If the material is an inactive metal consider using activator.
3. Shake the product thoroughly before use.
4. Apply the product to the male fitting on the leading threads in a 360° bead, leave the first thread free, making sure all voids are full. For bigger threads apply more product accordingly and putting a bead on the female.
5. Assemble and tighten as required.

For disassembly

1. Remove with standard hand tools.
2. In circumstances where hand tools do not work, use localized heat to bolt or nut, disassemble while hot.

For cleanup

To remove cured product use a combination of solvent and abrasion such as a wire brush. .

Precaution

1. Use with 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. For specific shelf life information, contact BYLA GmbH

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