

**TECHNICAL DATA SHEET FOR LOCKFAST P77**

**PRODUCT DESCRIPTION**

**LOCKFAST P77** 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.

**LOCKFAST P77** offers the following characteristics:

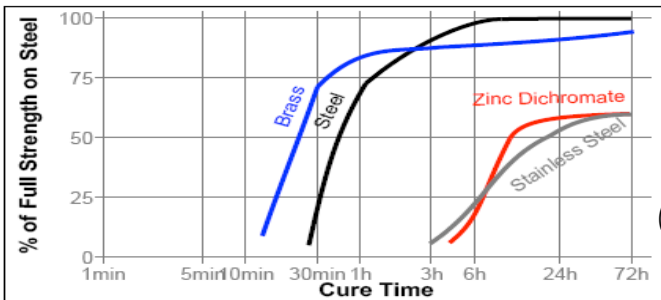
<b>Technology</b>	Acrylic
<b>Appearance (uncured)</b>	Yellow liquid
<b>Chemical Form</b>	Dimethacrylate ester
<b>Cure</b>	Anaerobic
<b>Fluorescence</b>	Positive under UV
<b>Secondary cure</b>	Activator
<b>Components</b>	Single – requires no mixing
<b>Viscosity</b>	Thixotropic, High
<b>Strength</b>	Medium
<b>Application</b>	Thread sealing

**PROPERTIES OF UNCURED MATERIAL**

	Typical Value
<b>Specific Gravity @ 25°C</b>	1.09
<b>Viscosity @ 25°C</b>	70,000-130,000 mPas
<b>Flash Point</b>	See MSDS
<b>Seal to operating pressure</b>	4 hours

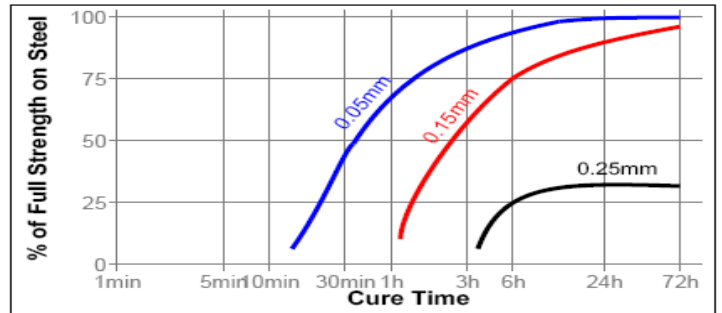
**CURE SPEED VS. SUBSTRATE**

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.



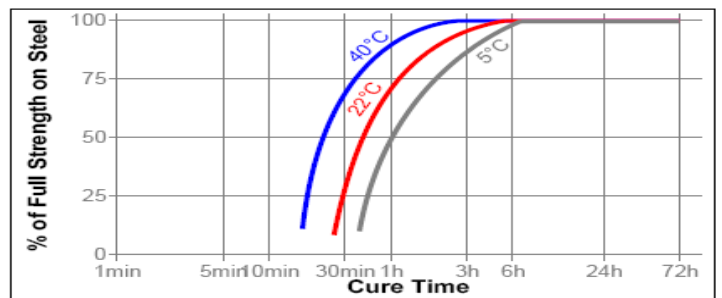
**CURE VS. BOND GAP**

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.



**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**

<b>Pressure Resistance (psi)</b>	10000
<b>Operating temp °C</b>	-54°C – 150°C

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

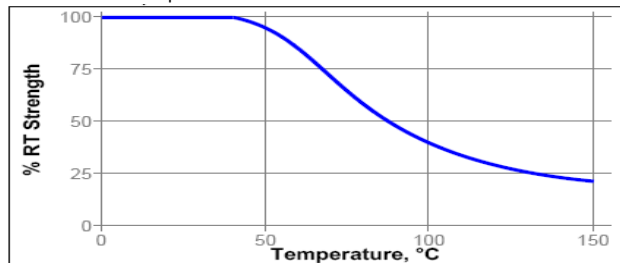
Adhesive Properties	Typical Value
Breakaway Torque M10 steel bolts & nuts ISO 10964	11Nm
Prevail Torque M10 steel bolts & nuts ISO 10964	6Nm

**TECHNICAL DATA SHEET FOR LOCKFAST P77**

**TYPICAL HEAT RESISTANCE**

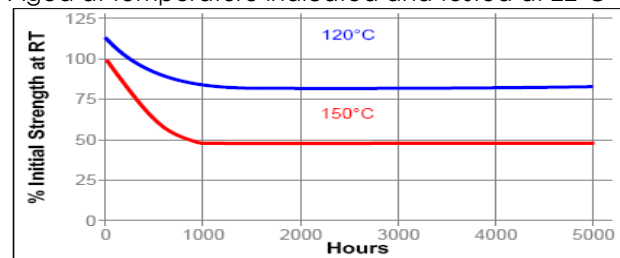
**HOT STRENGTH**

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		
		100h	500 h	1000 h
Motor oil (MIL-L-46152)	125	100	100	100
Unleaded Petrol	22	100	100	100
Brake Fluid	22	100	100	95
Ethanol	22	100	100	95
Acetone	22	90	80	65
Water/Glycol 50/50	87	100	90	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. If the material is an inactive metal consider using activator.
3. Shake the product thoroughly before use.
4. Apply several drops to the bolt & nut.
5. Assemble and tighten as required.
6. To prevent the clogging of the nozzle, do not let the tip touch metal surface during application.

**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**

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

**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. For specific shelf life information, contact Cyanotec Ltd.

**Disclaimer:** The data contained herein are furnished for information purposes only and are believed to be reliable. However, Cyanotec Ltd does not assume responsibility for any results obtained by persons over whose methods Cyanotec Ltd has no control. It is the user's responsibility to determine the suitability of Cyanotec Ltd products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that me be involved in the handling and use of any Cyanotec Ltd products. Cyanotec Ltd specially disclaims all warranties express or implied, including warranties of salability and suitability for a particular purpose arising from sale or use of Cyanotec Ltd products. Cyanotec Ltd further disclaims any liability for consequential or incremental damages of any kind including lost profits.