

TECHNICAL DATA SHEET FOR P77

PRODUCT DESCRIPTION

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.

P77 offers the following characteristics:

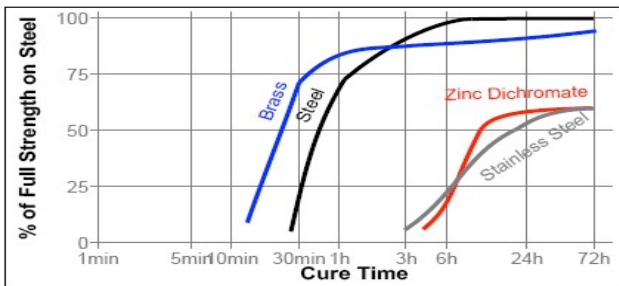
Technology	Acrylic
Appearance (uncured)	Yellow liquid
Chemical Form	Dimethacrylate ester
Cure	Anaerobic
Fluorescence	Positive under UV
Secondary cure	Activator
Components	Single – requires no mixing
Viscosity	Thixotropic, High
Strength	Medium
Application	Thread sealing

PROPERTIES OF UNCURED MATERIAL

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

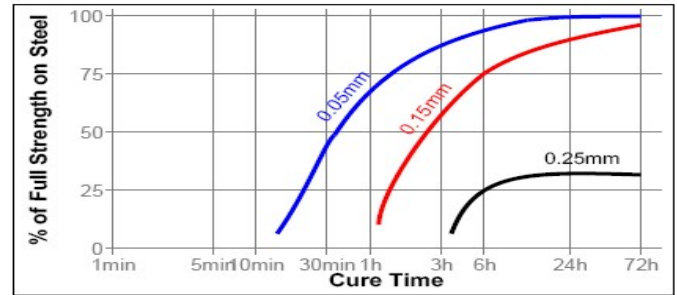
CURE SPEED VS. SUBSTRATE

The rate of cure is dependent 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.



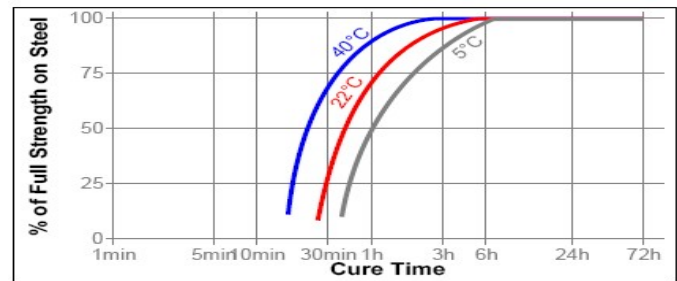
CURE VS. BOND GAP

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

Pressure Resistance (psi)	10000
Operating temp °C	-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

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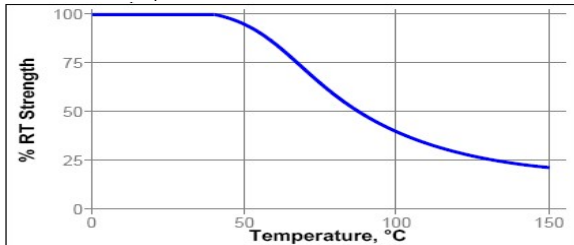
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TYPICAL HEAT RESISTANCE

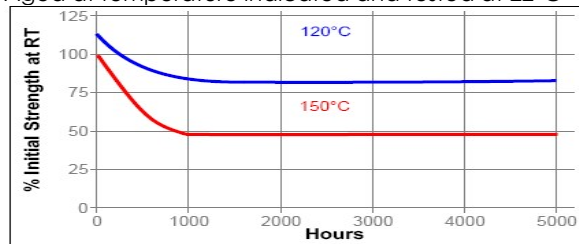
HOT STRENGTH

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 Adhesive Dispensing Ltd.

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