

TECHNICAL DATA SHEET FOR A90

PRODUCT DESCRIPTION

A90 is designed for the sealing and locking of threaded fasteners. The product is a single component anaerobic, low viscosity wicking, acrylic based thread locker. The product cures when confined in the absence of air between close fitting metal surfaces and prevents leakage and loosening from vibration and shock.

A90 CHARACTERISTICS

Technology	Acrylic
Appearance (uncured)	Green liquid
Chemical Form	Dimethacrylate ester
Fluorescence	Positive under UV
Cure	Anaerobic
Secondary cure	Activator
Components	Single – requires no mixing
Viscosity	Low
Strength	Medium to high
Application	Threadlocking

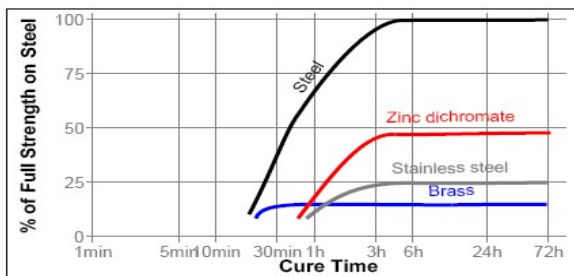
A90 is particularly suitable for uses including the filling of porosity in welds, castings, and powdered metal parts.

PROPERTIES OF UNCURED MATERIAL

	Typical Value
Specific Gravity @ 25°C	1.08
Viscosity @ 25°C	20 – 70 cPs
Flash Point	See MSDS
Fixture Time	10 - 15 mins

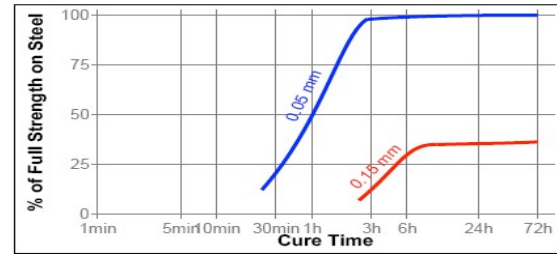
CURE SPEED VS. SUBSTRATE

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.



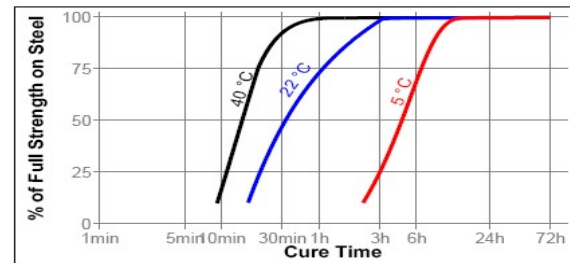
CURE VS. BOND GAP

The rate of cure will depend on the bond gap. Threaded fasteners gap size is dependent on thread type, quality, and size of product.



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

	Typical Value
Operating Temp °C	-54°C - 200°C

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

	Typical Value
Breakaway Torque M10 steel bolts & nuts ISO 10964	7Nm
Prevail Torque M10 steel bolts & nuts ISO 10964	30Nm

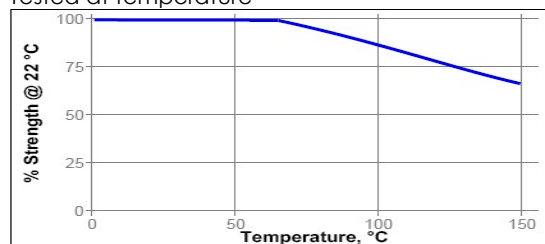
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TYPICAL HEAT RESISTANCE

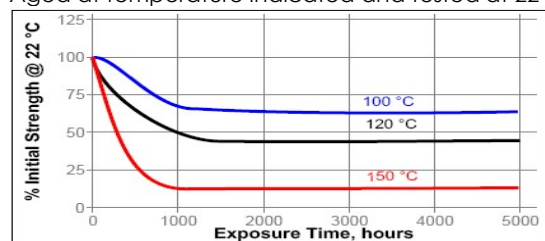
HOT STRENGTH

Tested at temperature



HEAT AGING

Aged at temperature indicated and tested at 22°C



CHEMICAL / SOLVENT RESISTANCE

Aged under conditions indicated and tested @ 22 °C.

Environment	°C	% of initial strength			
		100 h	500 h	1000 h	5000 h
Motor oil (MIL-L-46152)	125	85	85	50	50
Leaded Petrol	22	90	90	90	90
Brake Fluid	22	90	90	85	85
Water/Glycol 50/50	87	90	90	90	90
Acetone	22	85	85	85	85
Ethanol	22	80	80	80	80

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 de-bonder.
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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