

TECHNICAL DATA SHEET FOR A05

A05

PRODUCT DESCRIPTION

A05 is designed for the sealing and locking of threaded fasteners. The product is a single component anaerobic, high strength, 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.

A05 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	High
Application	Threadlocking

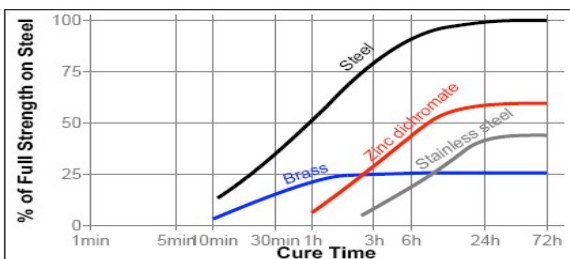
A05 is particularly suitable for uses including heavy duty applications, such as nuts onto studs in pump housings and studs into motor housings. Used also on other fasteners where maximum strength is required.

PROPERTIES OF UNCURED MATERIAL

	Typical Value
Specific Gravity @ 25°C	1.1
Viscosity @ 25°C	400 – 600 cPs
Flash Point	See MSDS
Fixture Time	15 mins

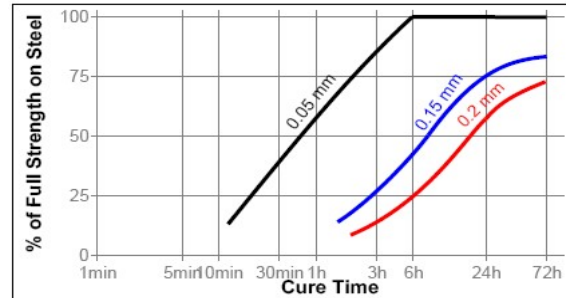
CURE SPEED VS. SUBSTRATE

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.



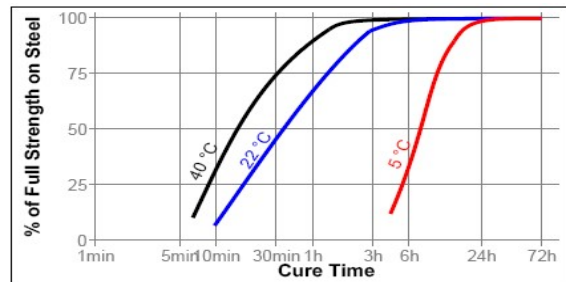
CURE SPEED VS. BOND GAP

The rate of cure will depend on the bond gap. Threaded fasteners gap size is depending 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

Operating Temp °C	Typical Value
	-54°C - 150°C

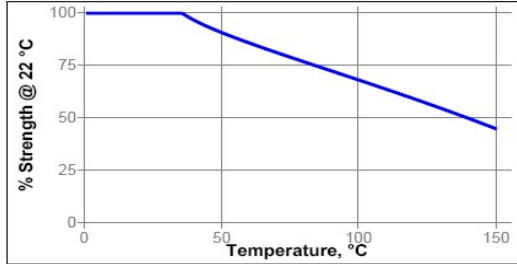
(After 24 hr at 20-25°C) on M10 steel nuts & bolts)

	Typical Value
Breakaway Torque M10 steel bolts & nuts ISO 10964	26Nm
Prevail Torque M10 steel bolts & nuts ISO 10964	36Nm

TYPICAL HEAT RESISTANCE

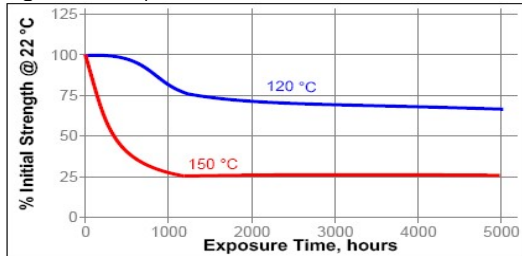
Hot Strength

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			
		100h	500h	1000h	°C
Motor oil (MIL-L-46152)	125	100	100	100	125
Unleaded Gasoline	22	100	100	95	22
Leaded Gasoline	22	100	100	100	22
Brake Fluid	22	100	100	100	22
Ethanol	22	100	100	95	22
Acetone	22	100	100	85	22
1,1,1 Trichloroethane	22	100	100	90	22
Water/Glycol 50/50	87	80	75	70	87

This product is not recommended for the use in pure and /or oxygen rich systems and so should not be used with chlorine or other strong oxidising materials.

For information on the safe handling of this product, consult 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. Users are recommended to confirm compatibility of the product with such substrate.

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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