

## TECHNICAL DATA SHEET FOR A11

**A11**

### PRODUCT DESCRIPTION

**A11** is designed for the bonding of cylindrical fitting parts. The product is a single component anaerobic, 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.

### A11 CHARACTERISTICS

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

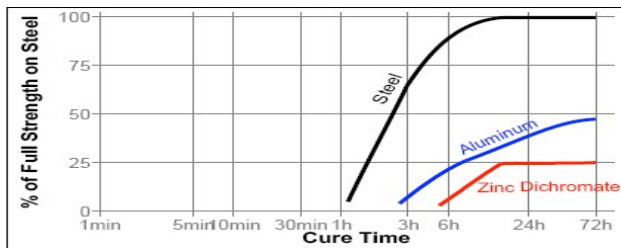
Applications include locating pins in radiator assemblies, bearings in transmissions and sleeves into pump housings.

### PROPERTIES OF UNCURED MATERIAL

	Typical Value
<b>Specific Gravity @ 25°C</b>	1.10
<b>Viscosity @ 25°C</b>	100 – 150 mPas
<b>Flash Point</b>	See MSDS

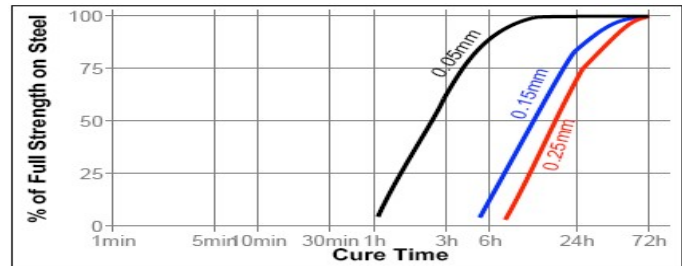
### CURE SPEED VS. SUBSTRATE

The rate of cure is dependent on substrate used. The graph below shows the breakaway strength developed with time on steel collars and pins compared to different materials and tested according to ISO 10123.



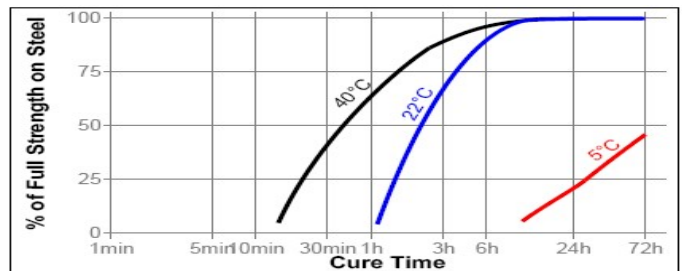
### CURE VS. BOND GAP

The rate of cure will depend on the bond gap. 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 steel collars and pins tested according to ISO 10123.



### 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>Operating Temp °C</b>	Typical Value -54°C - 200°C
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(After 24 hr at 20-25°C)

	Typical Value
Shear strength steel collars and pins ISO 1010123	>17Nm

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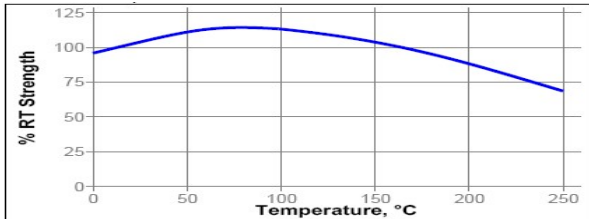
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### TYPICAL HEAT RESISTANCE

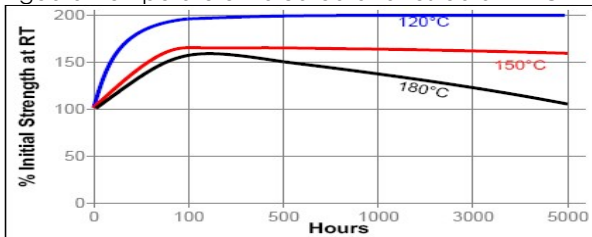
#### HOT STRENGTH

Tested at temperature



#### HEAT AGING

Aged at temperature indicated and tested at 22°C



#### CHEMICAL / SOLVENT RESISTANCE

Aged under conditions indicated and tested @ 22 °C.

Environment	°C	% of initial strength		
		100 h	500 h	1000 h
Motor oil (MIL-L-46152)	125	100	100	100
Leaded Petrol	22	95	95	95
Brake Fluid	22	100	100	100
Water/Glycol 50/50	87	95	80	80
Ethanol	22	100	100	75
Acetone	22	95	95	95

### 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.

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### 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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