

# ONEBOND THREAD SEALANT 070

## Description

The ONEBOND THREAD SEALANT 070 is an anaerobic curing adhesive for sealing of metal thread joints only. It replaces PTFE tape and yarn and gives instant sealing against moderate pressure. It seals against gas, water, LPG, hydrocarbons, oils and other chemicals. Thixotropic property prevents migration of sealant from thread before or during curing. Shock and vibrations resistant, sealing properties unaffected over the temperature range from -55°C to +150°C.

## Typical physical properties

<b>Composition</b>	anaerobic methacrylate
<b>Colour:</b>	yellow
<b>Fluorescence:</b>	under blue light
<b>Viscosity (+25°C - mPa s):</b>	20.000 - 80.000 thixotropic
<b>Specific weight (+25°C - g/ml):</b>	1,1
<b>Gap filling:</b>	M56 / 2" / 0,30 mm
<b>Shelf life +25°C:</b>	1 year in original unopened packaging

## Typical curing performance

Curing rate depends on the assembly clearance, material surfaces and temperature. Functional strength is usually reached in 1 - 3 hours and full curing takes 24 - 36 hours.

## Curing properties (typical)

Bolt M10 x 20 Zn - quality 8.8 - nut h = 0,8 d at +25°C:

<b>Handling cure time:</b>	15 - 30 minutes
<b>Functional cure time:</b>	1 - 3 hours
<b>Shear strength (ISO 10123):</b>	6 - 13 N/mm <sup>2</sup>
<b>Breakaway locking torque (ISO 10964):</b>	18 - 24 N m
<b>Prevailing locking torque (ISO 10964):</b>	7 - 14 N m
<b>Temperature range:</b>	-55°C/ +150°C

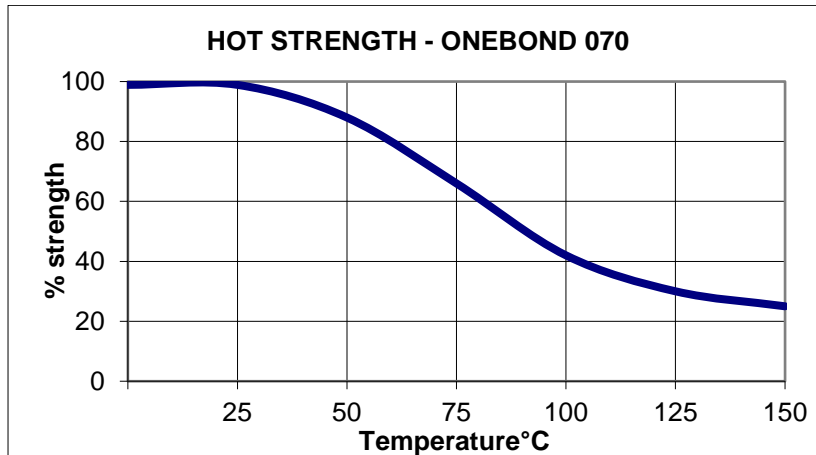
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## Environmental resistance

### Hot Strength

The graph below shows the mechanical strength vs. temperature.

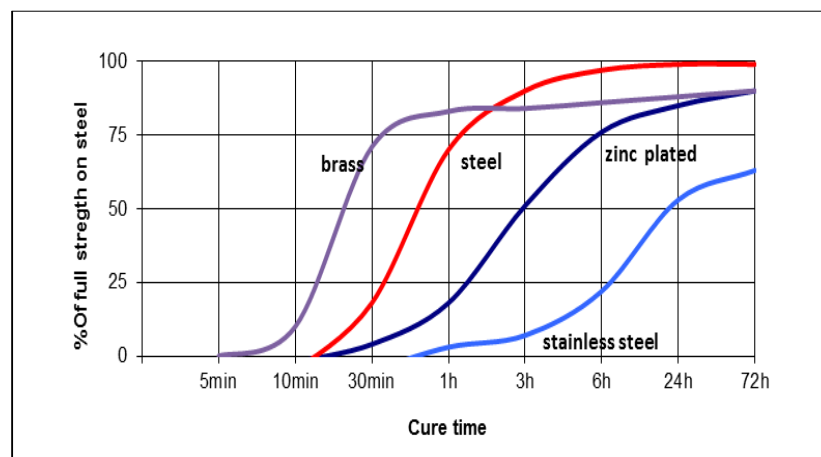
ISO 10964 - Bolt M10 x 20 Zn - quality 8.8 - nut h = 0,8 d at +25°C - pre-torque 5 N m



### Cure speed v substrate

The graph hereunder shows the breakaway strength development of the product (with time) on nuts/bolts M10 x 20 in comparison among several substrates.

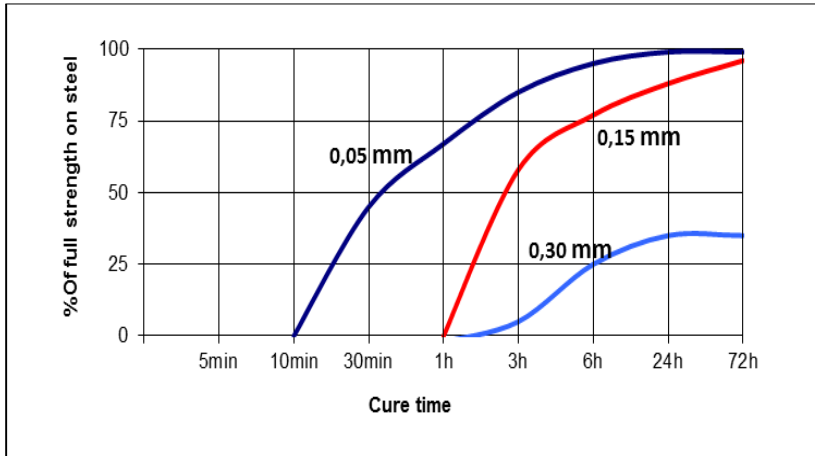
Tested in accordance with ISO 10964 at +25°C.



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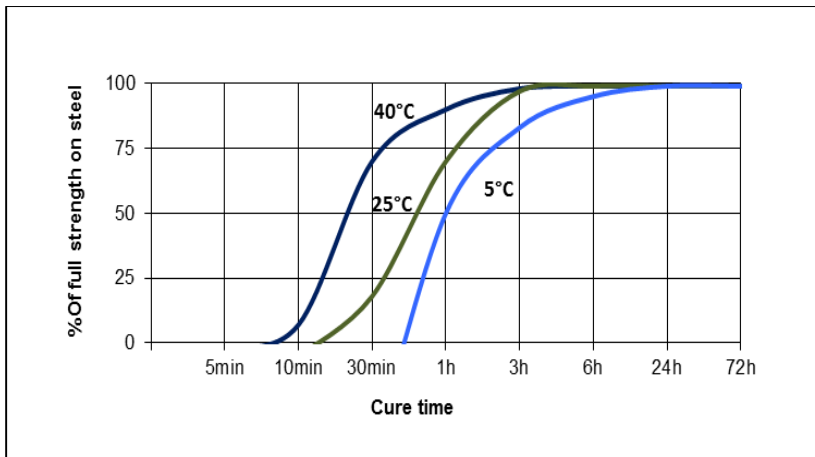
## Cure speed vs gap

The graph below shows the product shear strength (as %) at different controlled gaps. Steel pins/collars, tested in accordance with ISO 10123 at +25°C.



## Cure speed v temperature

The following graph shows the breakaway strength of the product (as %) at different temperatures. Steel nuts/bolts M10 x 20, tested according to ISO 10964.

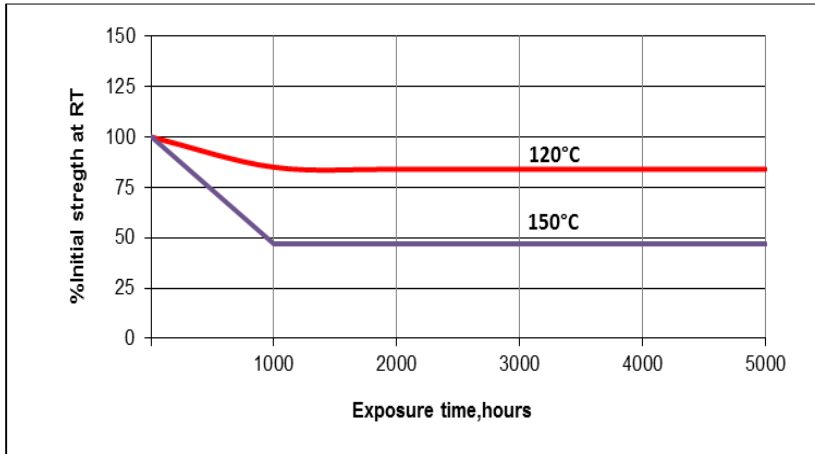


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## Heat aging

The graph below shows the strength resistance behavior as a function of temperature/time.

Zn nuts/bolts M10 x 20 - (pre-torque of 5 N m, cured 7 days at +25°C) - aged at temperature indicated and tested at +25°C according to ISO 10964.



## Chemical resistance

Aged under conditions below after 24 hours from polymerization at indicated temperature.

Substance	°C	Resistance after 100 h	Resistance after 500 h	Resistance after 1000 h
Motor oil	125	Excellent	Excellent	Excellent
Gear box oil	125	Excellent	Excellent	Excellent
Gasoline	25	Excellent	Excellent	Excellent
Water/glycol 50%	87	Excellent	Excellent	Good
Hydraulic oil	25	Excellent	Excellent	Good

\* For information on resistance with other chemicals, contact Onebond Technical Service

## General instructions for use

1. The product is recommended for use on metal thread joints only.
2. Clean and degrease parts before bonding with acetone or isopropyl alcohol.
3. Cut back stepped nozzle to give required bead size. Do not contaminate adhesive with metal.
4. Apply continuous bead circumferentially, 1-2 threads from the leading edge. Ensure sufficient is applied to give a complete seal.
5. Assemble and tighten the joint.
6. Wipe off any uncured excess adhesive from outside the joint.
7. Allow to cure. The time taken to reach a full cure will depend on the metals being used.

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## TIME TO CURE FOR USE WITH WHOLESOME (POTABLE) WATER

For Brass, Copper and Cast Iron allow 24 hours at +21.1°C.

For Stainless Steel and Aluminium allow 7 days at +21.1°C.

Liquid product can damage coating, some plastics and elastomers and late stress-cracking events might be induced if used with some thermoplastics.

For application on non-metal materials, contact Onebond Technical Service. For disassembly, use normal tools and eventually heat pieces at +150°C/+250°C, remove any residue of cured product mechanically and clean parts with Acetone.

## Storage

Keep product in a cool and dry room at no more than +25°C. To avoid contaminations do not refill containers with used product. For further information on applications, storage and handling contact Onebond Technical Service.

## Safety, handling and disposal

Consult Material Safety Data Sheet before use.

## Note

The data contained herein, obtained in Onebond laboratories, are given for information only; if specifics are required, please contact Onebond Technical Department. Onebond ensures abiding quality of supplied products according to its own specifics. Onebond cannot assume responsibility for the results obtained by others which methods are not under Onebond control. It is user's responsibility to determine suitability for user's purpose of any product mentioned herein. Onebond disclaims all warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, arising from sale or use of Onebond products. Onebond specifically disclaims any liability for consequential or incidental damages of any kind, including lost profits.