

# PA-77

## THREAD SEALANT, HIGH VISCOSITY, ANAEROBIC ADHESIVE

TECHNICAL DATA SHEET

AUGUST 2021



### PRODUCT DESCRIPTION

Bostik Born2Bond™ Pipe Sealing anaerobic adhesives are a reliable, adaptable solution, suitable for all types of threaded metal pipes and fittings, and both new installations and preventative maintenance. Filling and sealing all voids, these single component adhesives provide 100% surface-to-surface contact, achieving a cohesive, durable connection that will not fail even when subjected to vibration, extreme temperatures or chemical substances. A convenient, cost-effective alternative to conventional sealing alternatives like hemp or PTFE tapes, these adhesives eliminate the need for additional inventory.

PA-77 is a general purpose anaerobic thread sealant material with high viscosity and medium strength. Once cured the product prevents leakage and/or loosening of parts from vibration and shock.

This product is acceptable as a thread locking compound in and around food processing areas according to NSF S2 (Registration No.163874).

For more information, please consult <https://born2bond.bostik.com>

### KEY FEATURES

- Medium Strength
- High Viscosity
- Instant seal 10bar
- High pressure seal - 350bar
- 100% connection – no loosening
- Vibration resistant
- Corrosion prevention
- Single component
- Suitable for active and passive metals

### DIRECTIONS FOR USE

1. For best results, clean all surfaces (internal and external) with Born2Bond™ Pre-Bonding cleaner and wait until fully evaporated.
2. If the cure speed is too slow or on inactive metals, use Born2Bond™ Anaerobic Activator.
3. Apply the product into the threads, leaving the first thread free. Fill all voids thoroughly.
4. Properly tighten fittings with suitable tools. It will seal instantly to moderate pressures.
5. Wait for full cure to get maximum pressure resistance.

### METHOD OF USE

Manual: Directly from the bottle with or without dispensing tips for more precise dispensing.

Semi-Automated: Use of pressure-time systems for accurate volume and larger series.

Full-Automated: fully automated robot or application lines.

### APPLICATIONS

- Engines and powertrains
- Pumps and compressors
- Liquid and gas storage
- Hydraulic systems
- Metal pipes and fittings

### STORAGE/SHELF LIFE

Store product in the unopened container in a dry area out of direct sunlight. Storage below 7°C or greater than 28°C can adversely affect product performance. If stored properly, this product has a shelf life of 24 months.

### HEALTH/SAFETY

The Safety Data Sheet is available on the Bostik website and should be consulted for proper handling, cleanup and spill containment before use. Keep containers covered to minimize contamination.

### LIMITATIONS

This product is not recommended for use in pure oxygen and/or oxygen-rich systems and should not be selected as a sealant for chlorine or other strong oxidizing materials. Material removed from containers may be contaminated during use. Do not return product to the original container. Bostik will not assume responsibility for product that has been contaminated or stored under conditions other than those previously indicated. If additional information is required, please contact your local Technical Service Center or customer service representative.

## PRODUCT CHARACTERISTICS

Basis Technology	Acrylic
Components	1K
Appearance / Color	Yellow
Cure	Anaerobic
Temperature use Range	-55°C to 180°C

## UNCURED PHYSICAL PROPERTIES

Viscosity [Brookfield: Sp6 @10rpm @25°C]: 80.000 - 90.000 mPa.s	
Specific Gravity ASTM D1475 - 13(2020)	1.09

## CURING PROPERTIES

The table below shows the curing properties of the product on mild steel according to ISO 10964

Fixture time @ 20°C	<60min
Fixture time with Activator* @ 20°C	<10min
Full Cure @20°C	6-12h

\*Bostik Born2Bond Anaerobic Activator

## BONDING PERFORMANCE

The performance data reported below were measured according to ISO 10964. Product was applied on M10 mild steel bolts and cured for one week at 22°C (71.6°F) before testing. Oil-tolerance is measured on slightly oiled substrates (mild steel) and cured for 24h.

Breakaway torque mild steel unseated	11Nm
Shear strength [ISO 4587 - mild steel]:	5 to 15 N/mm <sup>2</sup>
Oil tolerance (Strength)	10Nm

## HOT STRENGTH

The data below shows the adhesive performance on M10 mild steel bolts at various temperatures.

The adhesive was cured for one week at 22°C. The breakaway strength was tested according to ISO 10964.

The strength test was performed after the specimen were heated for 30 minutes at the indicated temperatures.

Remaining @ 150°C	62%
Remaining @ 180°C	52%

## CONVERSIONS

$$(^{\circ}\text{C} \times 1.8) + 32 = ^{\circ}\text{F}$$

$$\text{kV/mm} \times 25.4 = \text{V/mil}$$

$$\text{mm} / 25.4 = \text{in}$$

$$\mu\text{m} / 25.4 = \text{mil}$$

$$\text{N} \times 0.225 = \text{lb}$$

$$\text{N/mm} \times 5.71 = \text{lb/in}$$

$$\text{N/mm}^2 \times 145 = \text{psi}$$

$$\text{MPa} \times 145 = \text{psi}$$

$$\text{N}\cdot\text{m} \times 8.851 = \text{lb}\cdot\text{in}$$

$$\text{N}\cdot\text{mm} \times 0.142 = \text{oz}\cdot\text{in}$$

$$\text{mPa}\cdot\text{s} = \text{cP}$$

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