RA-03

HIGH STRENGTH, LOW VISCOSITY, RETAINING ANAEROBIC ADHESIVE

TECHNICAL DATA SHEET
AUGUST 2021

PRODUCT DESCRIPTION

Bostik Born2Bond™ Retaining anaerobic adhesives are a cost effective, adaptable alternative or addition to mechanical retaining processes. Capable of bonding all types of cylindrical assemblies, these single-component solutions also seal all metal joints to eliminate the risk of fretting corrosion. They achieve 100% surface-to-surface contact, producing a cohesive, durable connection capable of withstanding vibration, extreme temperatures and chemical substances.

RA-03 is a low viscosity, high strength anaerobic adhesive designed to retain cylindrical parts. Once cured the product prevents leakage and/or loosening of parts from vibration and shock.

This product is acceptable as a retaining compound in and around food processing areas according to NSF S5 (Registration No.163875).

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

KEY FEATURES

- High strength
- Low viscosity
- High power transmission
- Resistance to dynamic loads
- Vibration resistant
- Recommended for gaps up to 0.15mm
- Corrosion prevention
- Single component

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 on inactive metals, use Born2Bond™ Anaerobic Activator.
3. For slip fitted parts, apply the adhesive around the pin and the inside of the collar and rotate during assembly to ensure fully coverage.
4. For press fitted parts, apply adhesive fully to both surfaces and assemble at high pressure.
5. For shrink fitted parts, the adhesive should be on the pin, the collar should be heated.
6. Parts should be fixed until sufficient handling strength is achieved.

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

- Gear manufacturing
- Machine engineering
- Bearing assembly
- Drive shafts

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.

Always use glasses and gloves when applying adhesives.

Bostik BORN2BOND™

RA-03

PRODUCT CHARACTERISTICS

Basis Technology	Acrylic
Components	1K
Appearance / Color	Green
Cure	Anaerobic
Temperature use Range	-55°C to 150°C

UNCURED PHYSICAL PROPERTIES

Viscosity [Brookfield: Sp1 @20rpm @25°C]	100 – 150 mPa.s
Specific Gravity ASTM D1475 - 13(2020)	1.04

CURING PROPERTIES

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

Fixture time @ 20°C	<15min
Fixture time with Activator* @ 20°C	<10min
Full Cure @20°C	24h

*Bostik Born2Bond Anaerobic Activator

BONDING PERFORMANCE

The performance data reported below were measured according to ISO 4857 after curing for one week at 22°C (71.6°F). Oil-tolerance is measured on slightly oiled substrates (mild steel) according ISO 10964 after curing for 24h.

Shear strength [ISO 4587 - mild steel]	>26 N/mm²
Oil tolerance (Strength)	20 N/mm²

CONVERSIONS

(°C x 1.8) + 32 = °F
kV/mm x 25.4 = V/mil
mm / 25.4 = in
µm / 25.4 = mil
N x 0.225 = lb
N/mm x 5.71 = lb/in
N/mm² x 145 = psi
MPa x 145 = psi
N·m x 8.851 = lb·in
N·mm x 0.142 = oz·in
mPa·s = cP

PRODUCT DISCLAIMER

Bostik offers this Technical Data Sheet ("TDS") for descriptive and informational use only. It is not a warranty, a contract or a substitute for expert or professional advice. Please also see the local product Safety Data Sheet for health and safety considerations.

The statements, technical information, data, and recommendations contained in this TDS are provided 'AS IS' and are not warranted or guaranteed in any way. They represent typical results for the products and are based on Bostik's research only. Since the conditions and methods of use of the products are beyond our control, Bostik expressly disclaims any and all liability and damages of whatever kind or nature that may arise from any use of the products, the results therefrom, or reliance on the information contain herein.

This TDS is one of several tools that may be used to help you find the product best suited for your needs. It is used at your own risk, and by using it, you are knowingly accepting and assuming any and all risks associated with its use and recommendations. BUYERS AND USERS ASSUME ALL RESPONSIBILITY AND LIABILITY FOR ANY AND ALL LOSS OR DAMAGE OF WHATEVER KIND OR NATURE ARISING FROM OR RELATED TO THE HANDLING OR USE OF BOSTIK'S PRODUCTS. The performance of the product, its shelf life, and application characteristics will depend on many variables, including but not limited to the kind of materials to which the product will be applied, the environment in which the product is stored and/or applied, and the equipment used for application, among other things. Any change in any of these variables can affect the product's performance. You are responsible to test the suitability of any product in advance for any intended use or application. Bostik does not guarantee the reliability, completeness, use, or function of the statements, technical information, data, and recommendations contained in this TDS. Nothing contained herein constitutes a license to practice under any patent, and it should not be construed as an inducement to infringe any patent. You are advised to take appropriate steps to be sure that any proposed use of the products will not result in patent infringement.

The information provided herein relates only to the specific products designated and may not be applicable when such products are used in combination with other materials or in any process. The product is sold pursuant to a supply agreement and/or Bostik's Terms and Conditions of Sale, which set forth the sole warranty, if any, that applies to the product. **NO OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE OR WARRANTY OF MERCHANTABILITY, IS MADE CONCERNING THE PRODUCTS DESCRIBED OR THE INFORMATION PROVIDED HEREIN, AND TO THE MAXIMUM EXTENT ALLOWED BY LAW, SUCH WARRANTIES ARE HEREBY DISCLAIMED. BOSTIK DISCLAIMS ANY LIABILITY FOR DIRECT, INCIDENTAL, CONSEQUENTIAL, OR SPECIAL DAMAGES TO THE MAXIMUM EXTENT ALLOWED BY LAW.**