**PRODUCT DESCRIPTION**

Born2Bond™ Flex is a flexible, elastic and low-odor, instant adhesive with exceptional adhesion to a very broad range of materials and surfaces. It has a curing time of only six minutes and becomes a polymer with more than 200% of elongation within 10 minutes. Its working times (in-mixer) can be up to six minutes. It can be used for high-volumetric gap filling, and achieves instant adhesion to most plastics, wood and metals and to porous and irregular surfaces.

**KEY FEATURES**

- Fixture time in 60 seconds*
- Hardens in 5-10 minutes*
- Elongation > 200%
- Absorbs impacts and vibrations
- High peel strength
- Bonds a large range of materials** including glass
- Translucent, low blooming
- Gel consistency for precise application
- Non sagging for vertical applications

**APPLICATIONS**

The common applications of this product are bonding leather, making elastic and waterproof joints, flexible bonding, bonding floor coverings and particle boards, damping vibrations, reinforcing parts, bonding glass and rubber.

**DIRECTIONS FOR USE**

1. Before applying Born2Bond Flex, make sure the surface is clean, dry and grease-free.
2. To use, Part A and Part B must be blended.
   - Product can be applied directly from the syringe using the plunger supplied and dispensed through the recommended mixing nozzle.
3. Hold the syringe upright and insert the plunger.
   - While keeping the syringe in an upright position, remove the cap, attach the mixing nozzle, and begin dispensing the adhesive upward until any bubbles present in the smaller component have been removed.
4. Dispense and discard a bead as long as the mixing nozzle, to ensure sufficient mixing.
5. Apply the mixed adhesive to one of the bond surfaces to be joined.
   - Parts should be assembled immediately after the mixed adhesive has been applied.
   - Bonds should be held by fixing or clamping until the adhesive has cured. Prevent assembled parts from moving during cure.
   - The bond should be allowed to develop to full strength before being subjected to any service load (typically 24 hours).

**STORAGE/SHELF LIFE**

Optimal storage: 2°C to 8°C (35.6°F to 46.4°F). Storage below 2°C (35.6°F) or greater than 8°C (46.4°F) can adversely affect the product’s properties. If stored properly, this product has a shelf life of 9 months from the packaging date.

**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**

*Depending on substrates. **Except polyolefins.

Always use glasses and gloves when applying adhesives.
Base Technology - Part A/B  |  Methoxyethyl cyanoacrylate (A)  
Components 1k - 2k  |  Plasticizer (B)  
Mix Ratio  |  4:1  
Appearance/Color  |  Transparent  
Gap Filling Capacity  |  1 cm (0.39 in)  
Temperature Use Range  |  -40°C to 60°C (-40°F to 140°F)  
Open Time  |  6 - 10 mins  
Mixer Life  |  6 - 10 mins  
VOC Content - Part A (ISO 11890-2)  |  61 g/L  
VOC Content - Part B (ISO 11890-2)  |  19 g/L  

**UNCURED PHYSICAL PROPERTIES**

Viscosity at 25°C (77°F)*  
- Part A  
120,000 - 170,000 cP @ 1.5 rpm  
6000 - 9000 cP @ 50 rpm  

Viscosity at 25°C (77°F)*  
- Part B  
70,000 - 130,000 cP @ 1.5 rpm  
3000 - 7000 cP @ 50 rpm  

Specific Gravity  
(ASTM D1875: 23°C / 73.4°F)  
1.12 g/mL (A)  
1.10 g/mL (B)  

Refractive Index, ABBE  
1.48 - 1.50  
*based on Brookfield viscometer

**CURED PHYSICAL PROPERTIES**

Shore Hardness A (ISO 868-2003)  |  76  
Tensile Strength (ISO 527)  |  2 MPa  
Elastic Modulus (ISO 527)  |  2 MPa  
Elongation at Break (ISO 527)  |  259%  
Glass Transition Temperature (ISO 6721)  |  35°C (95°F)  
Linear Shrinkage (ISO 10563)  |  9.2%  
Water Absorption (after 24 hrs)  
(ASTM D-542)  |  11.3%  
Impact Resistance (after 24 hrs)  
(ISD 9653)  |  21.0 kJ/m²  

**Electrical Properties of Resistivity IEC 60093**

Surface resistivity DC 500 V (Ohm)  |  3.71 x 10¹⁴  
Volume resistivity DC 1kV (Ohm.m)  |  3.21 x 10¹⁰  

**Corrected Dissipation Factor, Dielectric Constant IEC 60250**

D @ 1 kHz  |  0.06  
K′ @ 1 kHz  |  3.55  

**CONVERSIONS**

\[(°C \times 1.8) + 32 = °F\]


dc/mm x 25.4 = V/mil  
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  

**FIXTURE TIME**

**Fixture Time**  
Stainless Steel (A316)  |  60 - 90 seconds  
Steel (Mild Steel)  |  30 - 50 seconds  
Aluminum (A5754)  |  60 - 120 seconds  
Neoprene  |  60 - 90 seconds  
EPDM  |  45 - 75 seconds  
Rubber, nitrile  |  30 - 60 seconds  
ABS  |  45 - 75 seconds  
PVC  |  15 - 80 seconds  
Polycarbonate  |  60 - 90 seconds  
Phenolic  |  115 - 140 seconds  
Wood (Oak)  |  150 - 210 seconds  
Wood (Pine)  |  130 - 180 seconds  
Chipboard  |  45 - 60 seconds  
Leather  |  50 - 70 seconds  
PC/ABS  |  60 - 90 seconds  
Paper  |  60 - 90 seconds  

*if stored in proper conditions

**BONDING PERFORMANCE**
Lap shear strength (ISO 4587) @ 23°C (73.4°F) (MPa)

<table>
<thead>
<tr>
<th>Material</th>
<th>Score</th>
<th>Variation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grit-Blasted Mild Steel (GBMS)</td>
<td>10</td>
<td>+/- 2</td>
</tr>
<tr>
<td>Aluminum (A5754)</td>
<td>5</td>
<td>+/- 1</td>
</tr>
<tr>
<td>ABS</td>
<td>6</td>
<td>+/- 1 SF*</td>
</tr>
<tr>
<td>PVC</td>
<td>2</td>
<td>+/- 1</td>
</tr>
<tr>
<td>Phenolic</td>
<td>4</td>
<td>+/- 1</td>
</tr>
<tr>
<td>Polycarbonate</td>
<td>5</td>
<td>+/- 1 SF*</td>
</tr>
</tbody>
</table>

- Substrate failure

@ 100mm/min after 24h Curing at RT

<table>
<thead>
<tr>
<th>Material</th>
<th>Score</th>
<th>Variation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrile</td>
<td>0.2</td>
<td>+/- 0.05</td>
</tr>
<tr>
<td>Neoprene</td>
<td>0.2</td>
<td>+/- 0.05</td>
</tr>
</tbody>
</table>

After 1 week Curing at RT

<table>
<thead>
<tr>
<th>Material</th>
<th>Score</th>
<th>Variation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grit-Blasted Mild Steel (GBMS)</td>
<td>11</td>
<td>+/- 1</td>
</tr>
</tbody>
</table>

T-Peel Strength (ISO 11339) @ 23°C (73.4°F) (N/mm)

<table>
<thead>
<tr>
<th>Material</th>
<th>Score</th>
<th>Variation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mild Steel</td>
<td>1</td>
<td>+/- 0.3</td>
</tr>
</tbody>
</table>

HEAT AGING

The graph below shows the heat aging results. The adhesive was aged at the temperature indicated, tested at 22°C (71.6°F) and cured for one week. The lap shear strength was tested according to ISO 4587 on grit-blasted, mild steel (GBMS).

% of Initial Strength = f (Exposure Time (hours))

CHEMICAL/SOLVENT RESISTANCE

Aged under conditions indicated and tested on GBMS.

% of Initial Strength vs. Exposure Time (hours) and vs. Type of Contaminant

<table>
<thead>
<tr>
<th>Testing on GBMS</th>
<th>ENVIRONMENT</th>
<th>TEMP</th>
<th>% of Initial Strength</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Motor Oil</td>
<td>40°C (104°F)</td>
<td>88</td>
</tr>
<tr>
<td></td>
<td>Ethanol</td>
<td>23°C (73.4°F)</td>
<td>74</td>
</tr>
<tr>
<td></td>
<td>Gasoline</td>
<td>23°C (73.4°F)</td>
<td>49</td>
</tr>
<tr>
<td></td>
<td>IPA</td>
<td>23°C (73.4°F)</td>
<td>48</td>
</tr>
<tr>
<td></td>
<td>Water</td>
<td>23°C (73.4°F)</td>
<td>58</td>
</tr>
</tbody>
</table>

HEAT/HUMIDITY RESISTANCE

Aged under conditions indicated and tested @ 23°C (73.4°F).

% of Initial Strength vs. Exposure Time (hours)

<table>
<thead>
<tr>
<th>ENVIRONMENT - 95% rH &amp; 40°C (104°F)</th>
<th>% of Initial Strength</th>
</tr>
</thead>
<tbody>
<tr>
<td>GBMS</td>
<td>10</td>
</tr>
<tr>
<td>Polycarbonate</td>
<td>58</td>
</tr>
</tbody>
</table>
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.