High Performance Hot Melt Polyurethane Reactive (HMPUR) Solutions
Born2Bond™ offers innovative solutions for a wide range of applications and industries. These solutions will enable customers to improve efficiencies, increase design opportunities and enhance sustainability, making it easier for them to manufacture better, safer and more innovative products.

As engineering adhesive applications develop, they raise new challenges. These include questions of how to apply adhesives to ever-smaller and more complex items, how to accelerate curing processes and how to reduce waste, all while complying with environmental and health and safety regulations.

In response, we have developed a portfolio of ground-breaking engineering adhesives that focus on ‘by-the-dot’ bonding applications. These products sit under the Bostik Born2Bond™ brand – this name reflects our purpose and the collaborative bond we have with our customers.

Our Vision

For over 130 years, Bostik, an Arkema company, has been a leading global adhesive manufacturer specialising in innovative bonding and sealing solutions.

Bostik collaborates and innovates to create smart adhesives that are safer, more flexible, efficient and responsive to the dynamic challenges of our environment.

Born2Bond™ High Performance Hot Melt Polyurethane Reactive (HMPUR) Solutions

Advancements in production processes and trends such as miniaturization have made hot melt polyurethane reactive (HMPUR) solutions more important than ever. This is especially true of the electronic device sector, where precision, durability and speed of application are essential.

Bostik High Performance HMPUR solutions are now found in many applications, across a wide range of industries - helping manufacturers to meet modern day industry demands.
How does HMPUR work?

Evolution During Processing

Points To Consider
- Avoid moisture in storage and application or long-time heating.
- Choose proper temperature.
- Assembly within open time.
- Open time influenced by temperature / air flow.
- The longer the open time, the longer the setting time.
- Fast curing, sensible during application and storage.

Born2Bond™ HMPUR Applications for Electronics

What should be considered when choosing the right HMPUR solutions?

Determine The Preferred Application Methods

Born2Bond™ HMPUR solutions span a range of viscosities, providing flexibility in the choice of processing method:
- Low viscosity products can be swirl sprayed
- High viscosity products allow for bead application
- Some products can be applied by all three methods

Recognise The Process Requirements

While the recommended application temperature for Bostik’s HMPUR solutions is generally the same (typically between 110°C - 130°C), other process parameters can also guide the selection of the right product. These include:
- Manufacturing lines with high throughput might require high initial strength products.
- Other processes might require an extended handling window to position parts before the adhesive is set.

Bostik’s HMPUR solutions cover a range of processing considerations.

Align with Performance Requirements

Substrate adhesion is a primary concern. Some of Bostik’s HMPUR products are better suited than others at adhering to low energy substrates. For example:
- Cured polyurethane adhesives typically offer good chemical, solvent and water resistance. Bostik’s HMPUR product line offers varied levels of resistance to these conditions.
- Polyurethane adhesives can yield rigid bonds or bonds with more elastic properties; Bostik offers products on both ends of the spectrum.

Tailor-made solutions

With large R&D teams, specialist equipment and in-depth expertise in creating innovative solutions, Bostik is also able to support customers with tailor made hot melt polyurethane adhesives, designed to meet unique requirements.
Bostik HMPUR Range - Usage of Grade HMPUR

**Package**
- PP Syringe, 30 ml
- Aluminium Cartridge, 300 ml*

**Usage of Grade HMPUR**

- **APPLICATIONS**
  - Structural parts bonding
  - Structural parts bonding
  - Touch panel bonding
  - Acoustic assembly
  - Auto Display

- **COLOR**
  - Off White
  - Yellow - Fluorescing
  - Off White - Fluorescing
  - White - Black
  - White - Yellow
  - Black

- **VISCOSITY (mPa.s)**
  - HHD 6002: 5500 at 150°C
  - HHD 6006: 6000 at 150°C
  - HHD 6009-T: 3500 at 110°C
  - HHD 5510: 4300 at 110°C
  - HHD 5518BK: 6800 at 110°C
  - HHD 5529: 3700 at 110°C
  - HHD 5539BK: 9000 at 110°C

- **OPERATING TEMPERATURE (°C)**
  - HHD 6002: 120 to 140
  - HHD 6006: 100 to 120
  - HHD 6009-T: 100 to 120
  - HHD 5510: 110 to 130

- **OPEN TIME (min)**
  - HHD 6002: 2
  - HHD 6006: 3
  - HHD 6009-T: 2 to 5

- **DENSITY (g/cm³)**
  - HHD 6002: 1.1
  - HHD 6006: 1.0 to 1.1
  - HHD 6009-T: 1.1

- **TENSILE STRENGTH (MPa)**
  - HHD 6002: 12
  - HHD 6006: 11
  - HHD 6009-T: >10

- **ELONGATION AT BREAK (%)**
  - HHD 6002: 1125
  - HHD 6006: 950
  - HHD 6009-T: 1500

- **UV TRACE**
  - HHD 6002: No
  - HHD 6006: Yes
  - HHD 6009-T: Yes

- **SHELF LIFE (days)**
  - HHD 6002: 180
  - HHD 6006: 180

- **DISPENSING PERFORMANCE**
  - HHD 6002: ★★★★★★★★★★★
  - HHD 6006: ★★★★★★★★★★★

- **INITIAL STRENGTH (after 30 min)**
  - HHD 6002: ★★★★★★★★★★★
  - HHD 6006: ★★★★★★★★★★★

- **CURING SPEED**
  - HHD 6002: ★★★★★★★★★★★
  - HHD 6006: ★★★★★★★★★★★

- **BONDING ON PC+GF**
  - HHD 6002: ★★★★★★★★★★★
  - HHD 6006: ★★★★★★★★★★★

- **BONDING ON PA+GF**
  - HHD 6002: ★★★★★★★★★★★
  - HHD 6006: ★★★★★★★★★★★

- **BONDING ON INK GLASS**
  - HHD 6002: N/A
  - HHD 6006: N/A
  - HHD 6009-T: N/A

- **BONDING ON METAL**
  - HHD 6002: ★★★★★★★★★★★
  - HHD 6006: ★★★★★★★★★★★

- **IMPACT RESISTANCE**
  - HHD 6002: ★★★★★★★★★★★
  - HHD 6006: ★★★★★★★★★★★

- **AIR TIGHTNESS**
  - HHD 6002: ★★★★★★★★★★★
  - HHD 6006: ★★★★★★★★★★★

- **RELIABILITY**
  - HHD 6002: ★★★★★★★★★★★
  - HHD 6006: ★★★★★★★★★★★

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*Available only for HHD 6002 and HHD 6009-T

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Born2Bond™ - Join the Adhesive Transformation

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Born2Bond™ Hot Melt Polyurethane Reactive
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