

# BORN<sup>2</sup> BOND™



High Performance  
Hot Melt Polyurethane Reactive  
(HMPUR) Solutions



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## Bostik Born<sup>2</sup>Bond™

**Born<sup>2</sup>Bond™** 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 **Born<sup>2</sup>Bond™** 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.

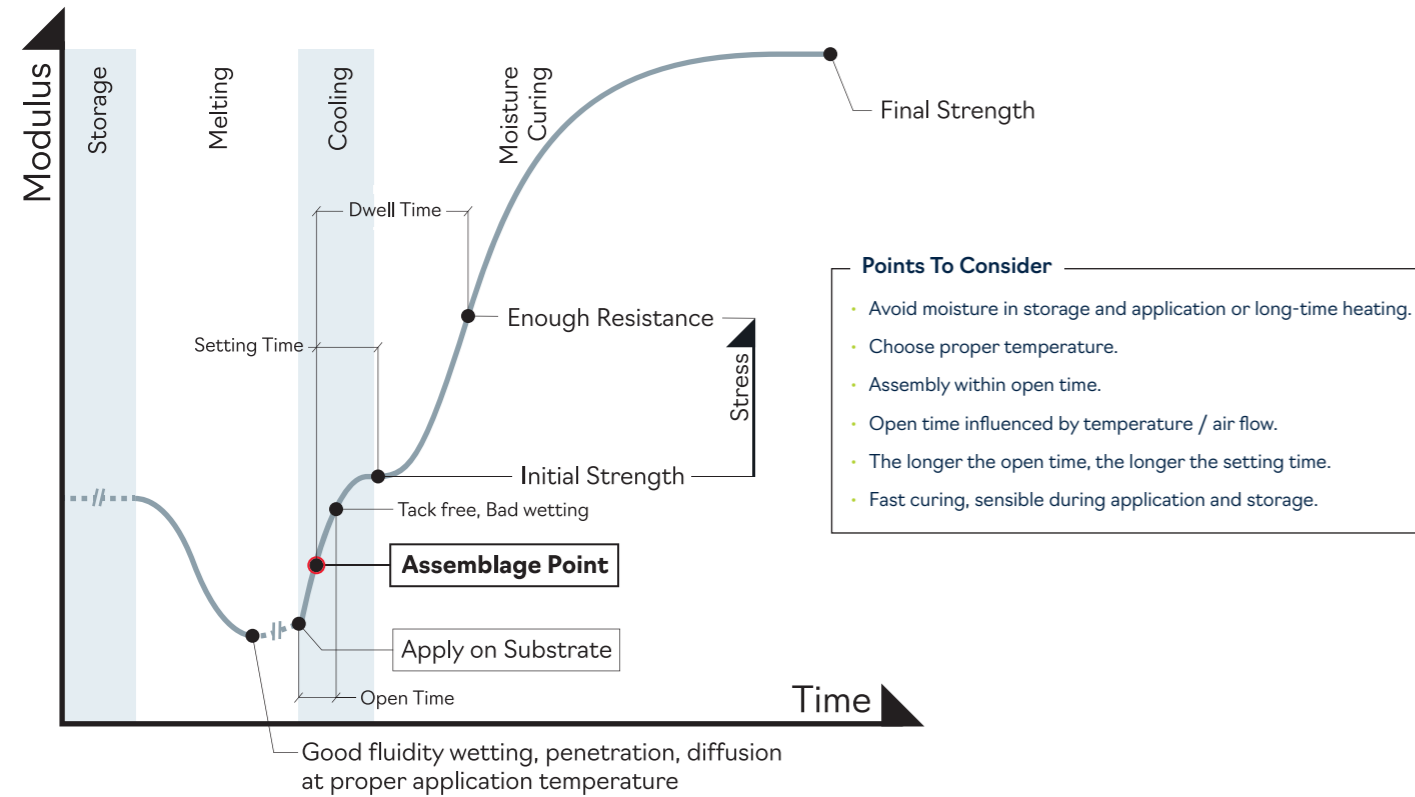
## Born<sup>2</sup>Bond™ High Performance Hot Melt Polyurethane Reactive (HMPUR) Solutions

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



## 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.

## Born2Bond™ HMPUR Applications for Electronics



### 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.

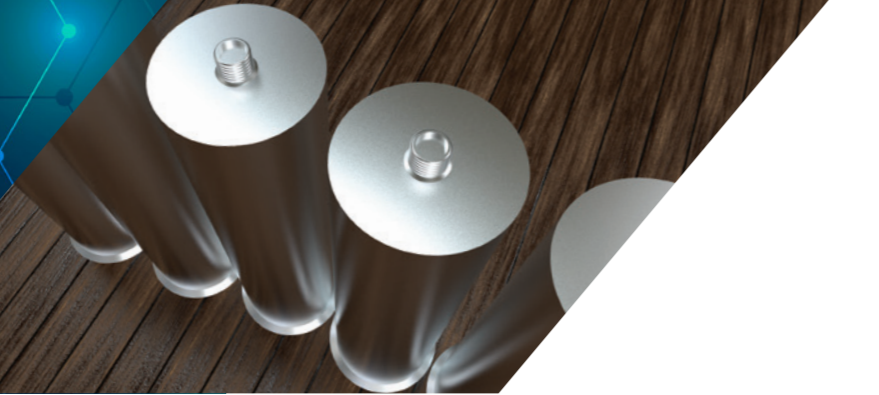
## Bostik HMPUR Range - Usage of Grade HMPUR

### Package

PP Syringe, 30 ml



Aluminium Cartridge, 300 ml\*



### Robotic



### Dispensing Unit

- Air Dispenser
- Jetting
- Screw

Moisture curing

Adheres to a variety of substrates

Suitable for a variety of application methods

Good balance between strength and elasticity

Accommodates bonding of dissimilar substrates

Low application temperature (typically 110°C to 130°C)

Good temperature, humidity and chemical resistance

One-component solution for a simplified buying process

Ability to provide "initial strength" upon cooling prior to cure

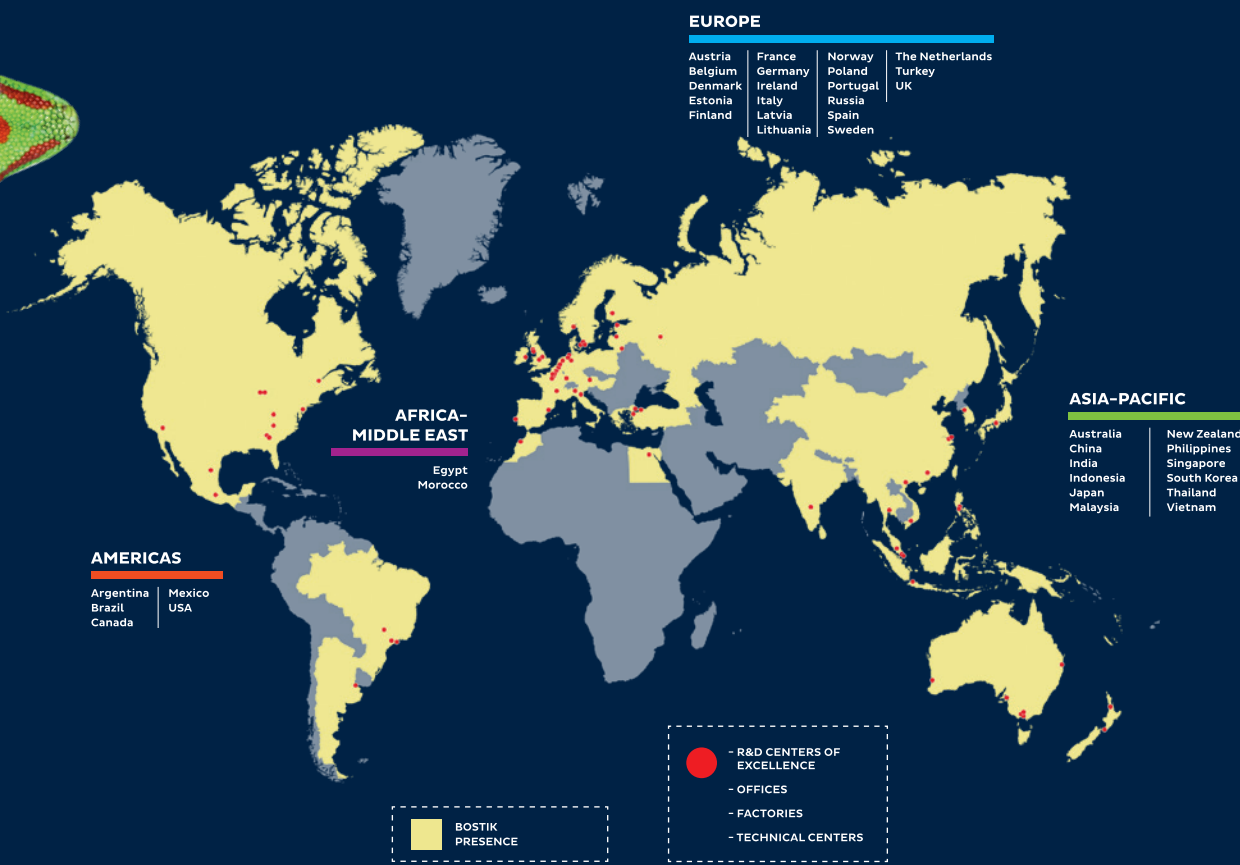
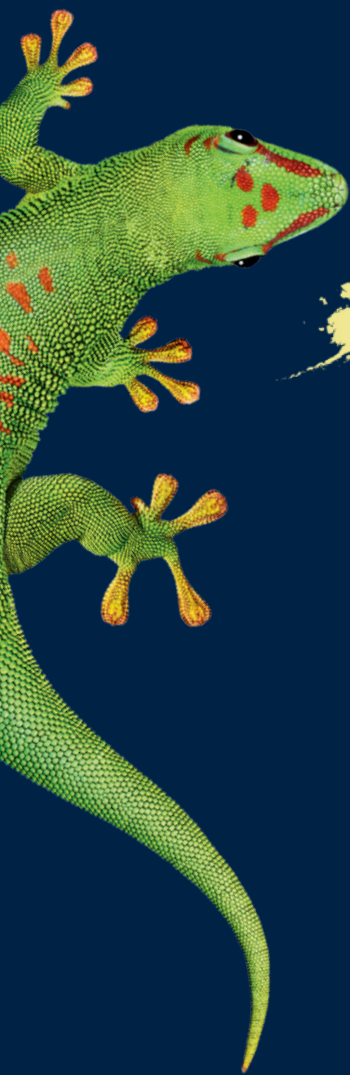
100%-solids and therefore have no volatile organic compounds (VOCs)

## Bostik HMPUR Range - Characteristics

	HHD 6002	HHD 6006	HHD 6009-T	HHD 5510	HHD 5518BK	HHD 5529	HHD 5539BK	HHD 5507	HHD 6103BK
<b>APPLICATIONS</b>	Structural parts bonding			Structural parts bonding		Touch panel bonding		Acoustic assembly	Auto Display
<b>COLOR</b>	Off White	Yellow - Fluorescing	Off White - Fluorescing	White - Yellow	Black	White - Yellow	Black	White - Yellow	Black
<b>VISCOSITY (mPa.s)</b>	5500 @130°C	6000 @130°C	3500 @110°C	4300 @110°C	6800 @110°C	3700 @110°C		2300 @110°C	9000 @110°C
<b>OPERATING TEMPERATURE (°C)</b>	120 to 140		100 to 120	100 to 120					110 to 130
<b>OPEN TIME (min)</b>	2	3	2 to 5	2 to 4				5 to 7	5
<b>DENSITY (g/cm³)</b>	1.1			1.0 to 1.1					1.1
<b>TENSILE STRENGTH (MPa)</b>	12	11		>10					11
<b>ELONGATION AT BREAK (%)</b>	1125	950	1500	>800					1200
<b>UV TRACE</b>	No	Yes	Yes	Yes					No
<b>SHELF LIFE (days)</b>	180			180					
<b>DISPENSING PERFORMANCE</b>	★★★	★★★	★★★★★	★★★★★	★★★★	★★★★★	★★★★★	★★★★★	★★★
<b>INITIAL STRENGTH (after 30 min)</b>	★★★★	★★★★★	★★	★★★★	★★★★	★★★★	★★★★	★★	★★
<b>CURING SPEED</b>	★★★	★★★★	★★	★★★★	★★★★	★★★★★	★★★★★	★★	★★
<b>BONDING ON PC+GF</b>	★★★★	★★★★★	★★★★	★★★★	★★★★	★★★★★	★★★★★	★★★★	★★★★
<b>BONDING ON PA+GF</b>	★★★	★★★	★★★★	★★★	★★★	★★★★	★★★★	★★★	★★★
<b>BONDING ON INK GLASS</b>	N/A	N/A	N/A	N/A	N/A	★★★★★	★★★★★	N/A	★★★★
<b>BONDING ON METAL</b>	★★★	★★★	★★★★	★★★★	★★★★	★★★	★★★	★★★★	★★★★
<b>IMPACT RESISTANCE</b>	N/A	N/A	N/A	N/A	N/A	★★★★★	★★★★★	N/A	★★★★★
<b>AIR TIGHTNESS</b>	N/A	N/A	N/A	N/A	N/A	★★★★★	★★★★★	★★★★★	N/A
<b>RELIABILITY</b>	★★★★	★★★★	★★★★	★★★★★	★★★★	★★★★★	★★★★★	★★★★★	★★★★★

\*Available only for HHD 6002 and HHD 6009-T

★★★★ = Most recommended.



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