Bostik
smart adhesives

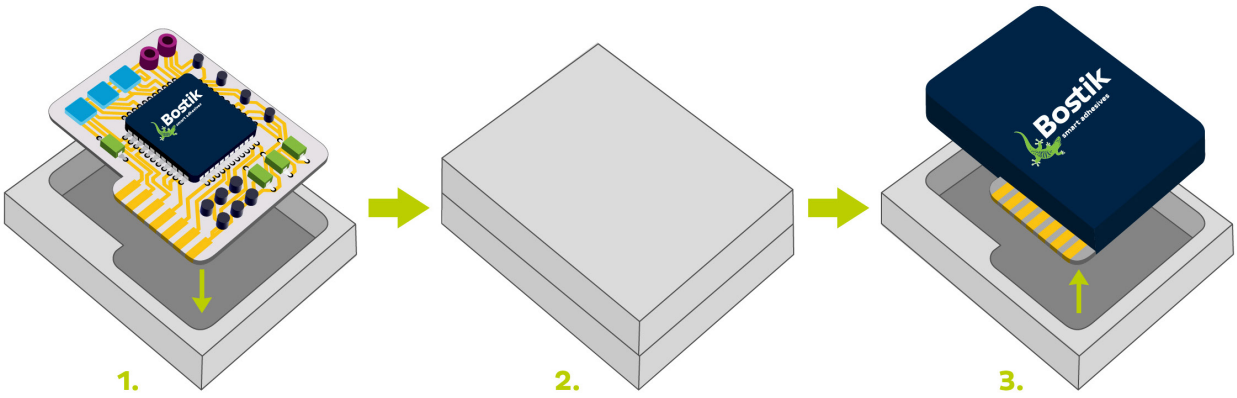
Molded for Success

SMART HOT MELT POLYAMIDES FOR LOW PRESSURE MOLDING

LOW PRESSURE MOLDING

Used to encapsulate electronic components, Low Pressure Molding (LPM) technology serves an important role in protecting and sealing items against moisture, dust, dirt and debris.

Simplified to a single, fast process, LPM is a cross between classic plastic injection and resin potting and is ideal for connectors, onboard electronics, LEDs and PCBs (printed circuit boards).



Encapsulate electronic parts in a single, fast process.

EXPERIENCED GLOBAL SOLUTION PARTNER

A pioneer in the development of LPM technology, Bostik's extensive expertise enables us to understand customers' unique performance and process requirements.

WORLD LEADER IN SMART ADHESIVES...

An Arkema company, Bostik formulates industrial adhesives at a global scale. Designed to improve operational efficiencies and aid in sustainability efforts, these adhesives also enhance product functionality and durability overall.

With a global R&D network comprised of three international Smart Technology Centers and 11 regional centers, we ensure fully integrated production and centralized competencies. Additionally, our knowledgeable technical support team enables us to work closely with customers, meeting their existing needs while anticipating future needs to come.

...AND IN SMART LOW PRESSURE MOLDING

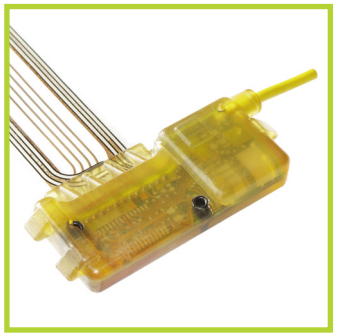
As a proven solution provider, Bostik has developed partnerships with equipment manufacturers and low pressure injection experts. These partnerships, in addition to our technical know-how of the LPM process, have enabled our company to offer the best solution for each and every encapsulation project.

Specifically, our LPM solutions include Thermelt, a comprehensive range of hot melt polyamide adhesives designed to meet customers' unique needs. Multipurpose with high resistance to temperature and oil, these adhesives offer easy processability at low pressure and low temperatures, which enables them to encapsulate even fragile, sensitive electronics for the most demanding environments.

We also manufacture reactive polyamides (PAR) that can withstand temperatures up to 200°C. Other formulations offer more cohesion and higher thermal stability for certain applications.

TYPICAL APPLICATIONS

Captors and Sensors



PCB Overmolding

Connectors and Cables

Antennas

KEY APPLICATION MARKETS

LPM applications are used in various key markets, such as automotive, electronics, smart phones and other industrial areas.

BENEFITS OF SMART LOW PRESSURE MOLDING

Process

SMALL PROCESS FOOTPRINT
Lower energy consumption due to low injection pressure and need for less equipment.

HIGH PRODUCTION SPEEDS
Reduced cycled times with one-component product; immediate set with no mixing errors.

EASIER MANUFACTURING
Simplified process with only three steps.

Product

HARMLESS ENCAPSULATION
Suitable for the most sensitive electronic components.

HIGH RESISTANCE
Water-tight, UL94 VO approved, resistant to high temperatures, shocks, harsh environments and solvents.

QUALITY DESIGN
Lightweight, sky-lining and aesthetically-pleasing design; no housing needed.

Sustainability

ZERO WASTE
Recyclable excess material and long shelf life

NATURAL MATERIAL
Solvent-free, bio-based up to 80%.

RECYCLABILITY
Improved end-of-life management.

HOT MELT POLYAMIDES*

The Thermelt polyamide hot melts range includes multipurpose products with easy processability and high resistance in harsh environments, and most are available in black and natural colors. Bostik helps you find a sustainable and safe solution for your most complex LPM projects.

Product	Operating Range (°C)	Shore Hardness (ISO 868)	Softening Point (°C) (ASTM D3461)	Typical Characteristics
Thermelt 861	-40°C to 125°C	38D	160°C ±5°C	General purpose moldable polyamide with good adhesion for industrial applications.
Thermelt 867	-40°C to 150°C	45D	183°C ±5°C	General purpose high performance moldable polyamide with good adhesion and environmental and thermal shock resistance. Used for applications such as automotive exteriors.
Thermelt 866	-25°C to 115°C	30D	155°C ±5°C	Moldable polyamide with excellent adhesion to PES, PC and other demanding substrates.
Thermelt 817R	-15°C to 125°C	49D	170°C ±5°C	Specialty moldable polyamide with very low application viscosity for demanding designs.
Thermelt 868	-40°C to 125°C	39D	160°C ±5°C	Moldable polyamide with very good UV and moisture resistance. Used for demanding outdoor applications.
Thermelt 858	-40°C to 150°C	49D	180°C ±5°C	Moldable polyamide with very good thermal stability as well as UV and moisture resistance. Available in black only.
Thermelt 865	-55°C to 120°C	31D	157°C ±5°C	Moldable polyamide with very good low temperature resistance and good adhesion for automotive applications.
Thermelt 892	-20°C to 140°C	53D	173°C ±5°C	Moldable polyamide with increased strength and hardness for industrial and consumer electronics applications. Available in black only.
Thermelt 195	-20°C to 150°C	56D	200°C ±5°C	Moldable polyamide with excellent thermal stability and increased hardness for electronics overmolding.
Thermelt 861 HV	-40°C to 125°C	22D	160°C ±5°C	General purpose high-end moldable polyamide with good adhesion and improved internal cohesion for industrial applications. Available in black only.
Thermelt 867 HV	-40°C to 150°C	32D	182°C ±5°C	General purpose, high-end moldable polyamide with good adhesion, very good mechanical properties and improved internal cohesion for demanding industrial applications. Available in black only.

REACTIVE POLYAMIDES (PAR)*

Able to be applied at low temperatures like standard moldable polyamides, PAR hot melts use regular LPM equipment coupled with a specific drum or bulk meter. They cure after application to form a cross-linked network that provides superior temperature resistance up to 200°C.

PARs enable LPM to be used in demanding applications that require temperature resistance of 150°C to 200°C, such as in automotive component assembly.

Product	Operating Range (°C)	Shore Hardness (ISO 868)	Softening Point (°C) (ASTM D3461)	Typical Characteristics
PAR1000	-40°C to 200°C	37D	161°C ±5°C	Reactive moldable polyamide with very high temperature resistance, mainly used for electronic/electrical components, connectors and cables for automotive applications.
PAR1002	-55°C to 200°C	20D	144°C ±5°C	Reactive moldable polyamide with very high and low temperature resistance, mainly used for electronic/electrical components, connectors and cables for automotive applications.

LPM POLYAMIDE HOT MELTS PRODUCTS*

General Purpose

Improved Mechanical Properties

Application

- Increased Hardness
  - TH892
- Thermal Stability
  - TH195

Resistance to Harsh Environments

Application

- UV & Outdoor Resistance
  - TH868
  - TH858
- Cold Resistance
  - TH865

Adhesion to Difficult Substrates

Application

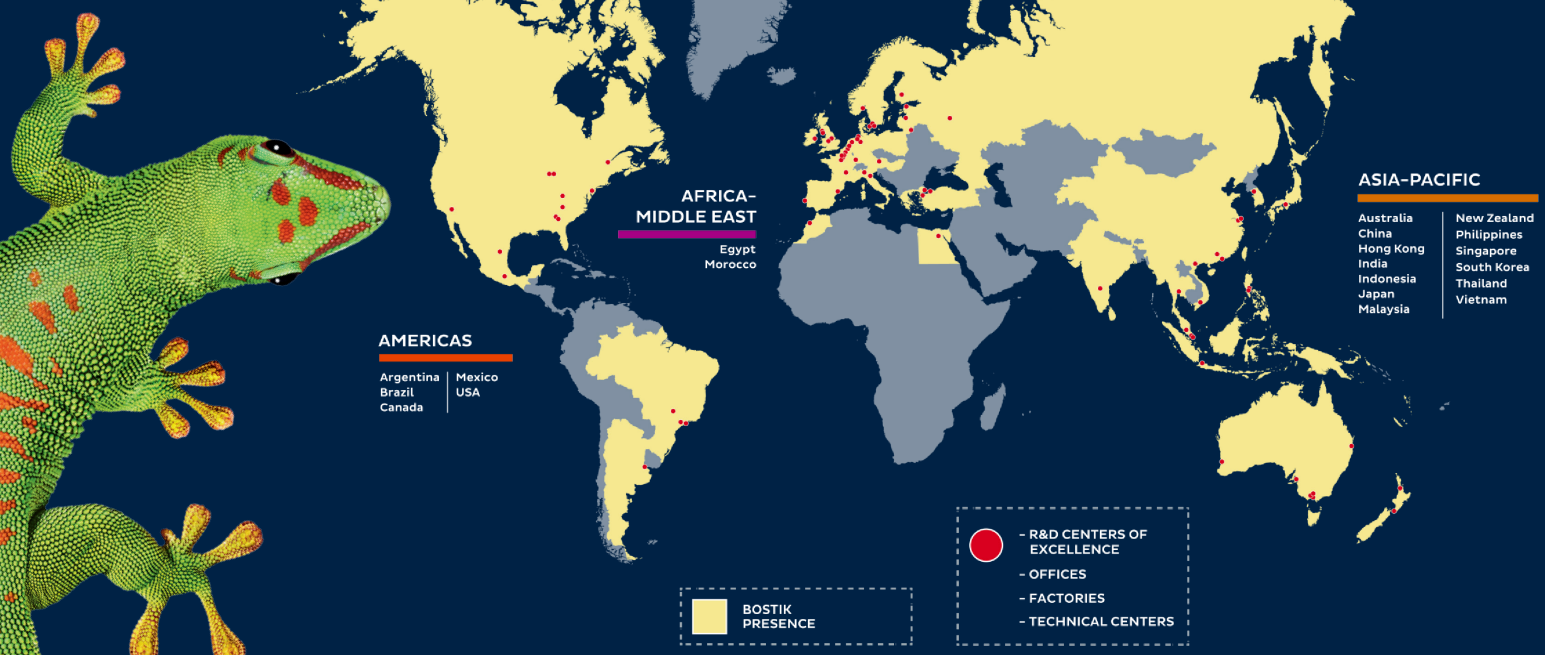
- Very Low Viscosity
  - TH817R
- Good Adhesion
  - **Mechanical Performance**
    - Good
      - TH861
      - New! Improved cohesive and mechanical properties: TH861HV
    - Very Good
      - TH867
      - New! Improved cohesive and mechanical properties: TH867HV
- Very Good Adhesion
  - TH866

PAR Reactive Polyamide

Application

- Excellent Heat Resistance
  - **Cold Resistance**
    - Good
      - Unique technology! Excellent heat resistance: PAR1000
    - Excellent
      - Unique technology! Excellent heat resistance: PAR1002

*Available grades may vary by region



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03.23 .18