



# Get on Board!

**SMART ADHESIVES FOR BUS & COACH**



# Bostik, a leading adhesive specialist

As one of the largest adhesive and sealant companies, Bostik's business involves more than just sticking things together. Our adhesives are used in a wide range of industries, from industrial manufacturing, assembly and transportation, to everyday mobility improvement applications.



Bostik has patented over 9,000 technologies for various applications. Today, we operate in the industrial, construction and consumer sectors in more than 50 countries.

## Bostik in Transportation

Bus, rail and automotive manufacturers require adhesive technologies that are able to cope with the unique conditions of each region, such as high temperatures or UV exposure.

For buses, coaches and shuttles, Bostik develops an intelligible shortlisted range of technologies covering multiple manufacturing applications and constraints.

Bostik provides a wide range of technologies adapted to multiple applications for the interior and exterior, keeping in mind the need of manufacturers for safer, lighter, and more sustainable solutions.

**50%** OF BUS MANUFACTURERS ARE USING BOSTIK TECHNOLOGIES

**75%** OF SMP IN BUS APPLICATIONS COME FROM BOSTIK

**98%** OF BUS APPLICATIONS CAN BE SOLVED WITH BOSTIK TECHNOLOGIES



## Aligned with manufacturers priorities



### Safety

Remain committed to create products that comply with stringent safety standards, ensuring the health and well-being of the individuals who manufacture and benefit from the products.



### Lightweight

Bus manufacturers are redesigning their products and seek for any opportunity to integrate lighter materials, without compromising on their performance and added value.



### Sustainability

Bus manufacturers face increasingly stringent environmental regulations, need reliable suppliers to develop responsible production processes and study their product's life cycle.



# Interior

## MAIN APPLICATIONS

Bostik offers solutions for a wide range of interior applications, including:

- Seats & Trim
- Flooring & Roofing
- Cockpit & Components
- Glazing

Depending on the application, Bostik proposes solutions based on different technologies:

- Sealants / Adhesives
- Structurals
- Liquid systems
- Hotmelt adhesives
- Cyanoacrylate Adhesives
- Anaerobic Adhesives

Bostik's offer allows a bus manufacturer to choose a high performance solution mixed with, depending on the need, key characteristics such as:

- Ease of use
- Low VOC
- Low odour, low bloom
- CMR free
- Solvent free
- Lightweight

## + Repair

- 2KPU
- MMA Range
- Born2Bond Repair
- Service Products (Cleaners & Lubricants)

### SIDE PANELS

SMP Range  
PU Range  
MMA Range

### SEALING FINISHING

SMP Range  
PU Range

### WINDOW FINISHING

SMP Range  
PU Range  
CA Range

### DRIVER'S AREA

SMP Range  
MMA Range  
CA Range

### LUGGAGE RACKS

MMA Range  
HMPSA Range  
CA Range

### DESTINATION SIGN

SMP Range  
CA Range

### SEATS AND COMPOSITES

MMA Range  
Water Based Range  
Solvent Based Range  
Hotmelt Range  
CA Range

### FLOOR PANELS

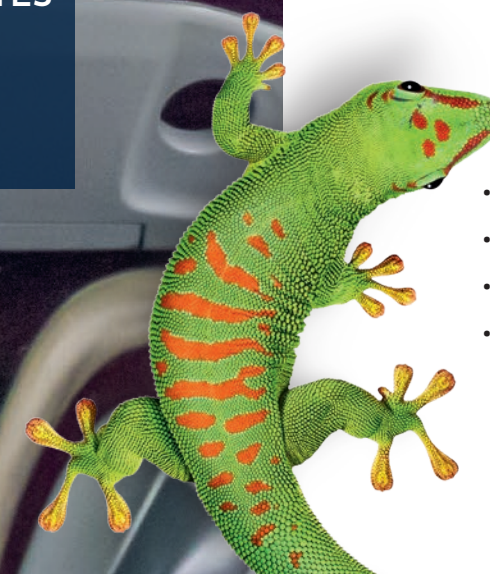
SMP Range  
PU Range

### FLOOR COVERING

SMP Range  
Water Based Range  
Solvent Based Range  
HMPSA Range

### WHEEL HOUSES

SMP Range  
PU Range  
MMA Range





# Exterior

## MAIN APPLICATIONS

Bostik offers solutions for a wide range of exterior applications, including:

- Glass Bonding & Sealing
- Panel Bonding
- Chassis Bonding
- Various Sealings

Depending on the application, Bostik proposes solutions based on different technologies:

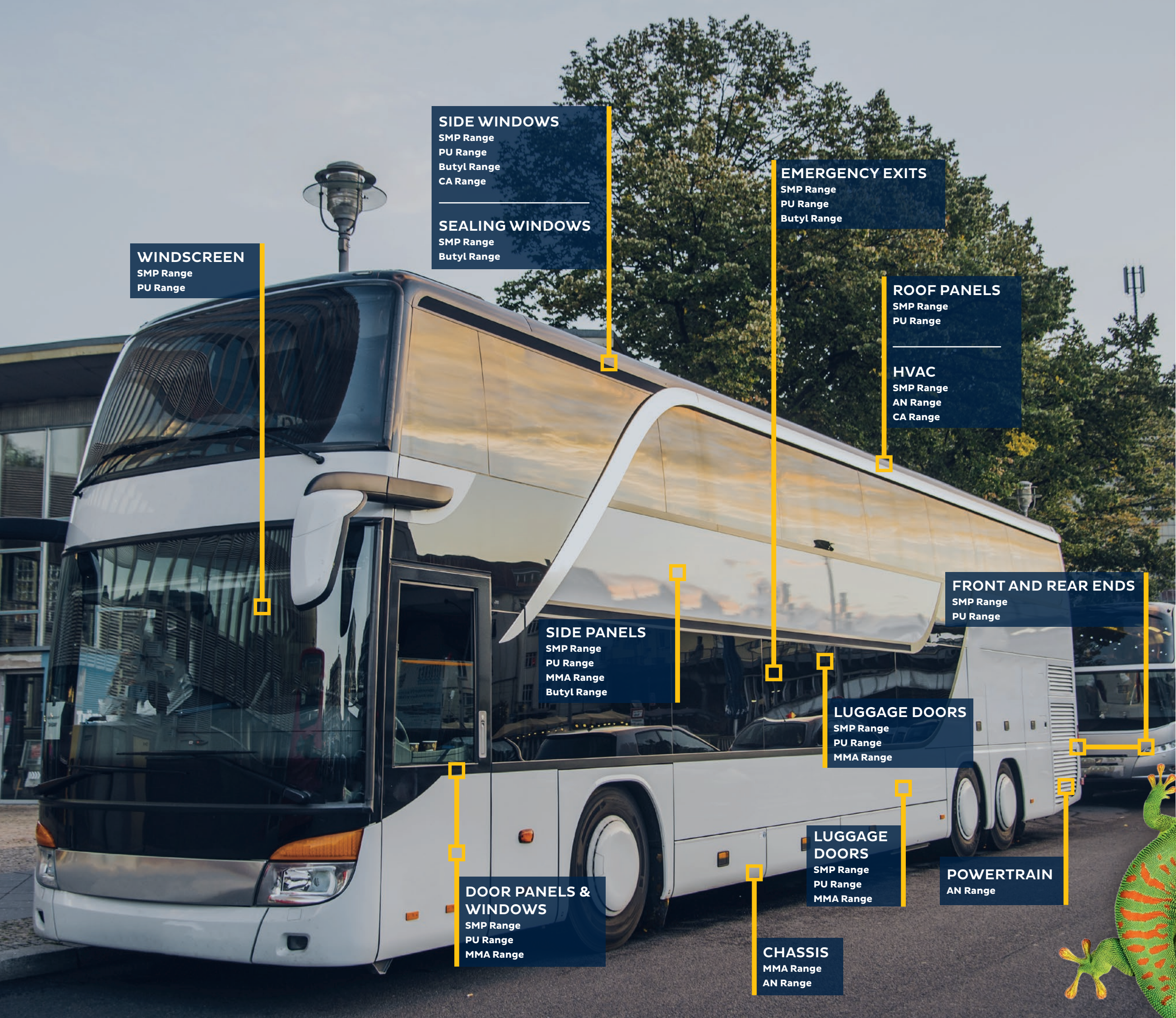
- Sealants / Adhesives
- Structural adhesives
- Hotmelt adhesives
- Cyanoacrylate Adhesives
- Anaerobic Adhesives

Bostik's offer allows a bus manufacturer to choose a high performance solution mixed with, depending on the need, key characteristics such as:

- Ease of use
- Low VOC
- Low odour, low bloom
- CMR free
- Solvent free
- Lightweight

## + Repair

- 2KPU
- MMA Range
- Born2Bond Repair
- Service Products (Cleaners & Lubricants)





# Interior



	SEALANTS / ADHESIVES		STRUCTURAL	LIQUID		HOTMELT	BUTYL	ENGINEERING ADHESIVES	
	SMP*	PU		WATER BASED	SOLVENT BASED			CA	AN
Side Panels	•	(•)	•				(•)		
Floor Panels	•	(•)	•				(•)		
Floor Covering	•			•	•	•			
Wheel Houses	(•)	(•)	•						
Composite Parts	(•)		•					(•)	
Seats				•	•	•		(•)	(•)
Window Finishing	•	(•)						(•)	
Sealing Finishing	•	(•)						(•)	
Luggage Racks	(•)	(•)	•					(•)	
Driver's Area	•	(•)	•					(•)	
Destination Signs	•	(•)	•					(•)	

• Recommended (•) Optional  
\* SMP can be used with DUAL technology to accelerate process time

**Sealant / adhesives systems** are designed to meet all bonding and sealing requirements, while significantly optimising production time. Bostik has been the market leader in SMP technology in the transportation market for over 25 years. Formulated with both adhesive and sealant capabilities, **SMP** is ideal for composite bonding, sidewall and floor panel bonding, and windshield bonding. Designed to offer good adhesion and varied open times, it allows operational efficiencies by reducing production complexity, time and costs. Unlike certain adhesive technologies, SMP also improves aesthetic appeal and is a safer choice for workers.

**Structural** adhesives are load-bearing, they add strength to the exterior parts for durability and reliability. Bostik's **MMA** products provide a unique balance of high strength, impact and fatigue resistance, flexibility, elongation, shear and peel strength, and are usable within a wide temperature range. They cure at ambient temperature with controlled cure speed and allow little or no surface preparation. They are not moisture sensitive, and are water and chemical resistant.

# Exterior



	SEALANTS / ADHESIVES		STRUCTURAL	BUTYL (liquid or tape)	ENGINEERING ADHESIVES	
	SMP*	PU			CA	AN
Front & Rear Ends	•	(•)	(•)			
Windscreen	•	(•)		•		
Side Windows	•	(•)		•		
Sealing Windows	•				(•)	
Side Panels	•	(•)	•	•		
Luggage Doors	•	(•)	•			
Door Panels & Windows	•	(•)	•			
Emergency Exits	•	(•)	•			
Roof Panels	•	(•)	(•)			
Chassis / Powertrain	•	(•)	•			•
Pipe Sealing and Threadlocking						•
Repair			•		(•)	(•)

• Recommended (•) Optional  
\* SMP can be used with DUAL technology to accelerate process time

Using **Hotmelt adhesives** for a range of applications offers the following advantages: optimal holding power, superior flexibility for better performance under constant stress, and quick adhesion. HMPSA/PO for interior applications provide instant bonds as they solidify by cooling, and remain permanently tacky.

Bostik's **Butyls** for exterior applications are non-hardening mastic sealants designed to form a weatherproof and dust-proof seal, which stays permanently flexible.

**Liquid adhesives** offer excellent adhesion to low surface energy substrates. Solvent based adhesives are designed for pressure bonding application with a quick drying time, quick processing, excellent creep resistance, and green strength. Water-based adhesives are environmentally friendly and highly versatile materials. They offer high tack, and good water and heat resistance. Bostik's **Born2Bond™ Engineering Adhesives** range includes Instant Adhesives, Light Cure Adhesives, Anaerobic Adhesives, Cleaners & Lubricants for reliable assembly, maintenance and repair applications.



# European product sheet

SEALANTS/ADHESIVES other grades availables*						
Products	Technology	Application	Skinning time	Elongation	Tensile Strength	Technology advantages
ISR 70-12 AP	SMP	Glazing	15 min	300%	4.0 MPa	Primerless, Odourless, Very high green strenght, Very good UV resistance
ISR 70-08 AP	SMP	Glazing	15 min	300%	2.7 MPa	Primerless, Odourless, Low VOC, Easy handling, Efficient, Storage stability, Reliable
ISR 70-05 AP	SMP	Bonding	15 min	200%	2.9 MPa	Primerless, Odourless, Low VOC, Easy handling, Efficient, Storage stability, Reliable
ISR 70-03/SSKF	SMP	Bonding	15/35 min	200%	3.5 MPa	Primerless, Odourless, Low VOC, Good initial strength, Efficient, Storage stability, Reliable
ISR 70-01	SMP	Sealing	120 min	350%	1.5 MPa	Primerless, Odourless, Very good UV resistance, Solvent, Isocyanate, and PVC free
STR 60-02	SMP	Multipurpose	30 min	300%	1.8 MPa	Excellent UV stability and ageing properties, Easy to apply, Solvent, isocyanate, and PVC free, Primerless
PSR 50-08	PU	Glazing	30 min	400%	9.0 MPa	One-component, High viscosity, Flexible and high performance elastomeric polyurethane, Solvent free, Odourless and also nonconductive
PSR 40-02	PU	Multipurpose	70 min	600%	1.8 MPa	Long open time, Good resistance to water, Salt water and grease

STRUCTURAL ADHESIVES						
Products	Technology	Application	Open Time	Elongation	Lap Shear Strength	Technology advantages
FIT30 15	MMA	Metal and galva bonding, composites	5-7 min	30%	20 MPa	Primerless, Structural bonding, High modulus, Fast curing, Non-sagging, Reliable and high peel resistance
SAF Ultimate 10	MMA	Metal, Plastics, Composite	5-6 min	90%	18 MPa	Primerless, Impact resistance, Very fast curing, Metal bonding
SAF Ultimate 15	MMA	Panel bonding, Plastic, composites.	6-8 min	90%	15 MPa	Primerless, high impact resistance, Fast curing, Powder coating resistance
SAF Ultimate 25	MMA	Large panel bonding, plastics, composites	12-15min	120%	17 MPa	Primerless, High impact resistance, Medium curing, Metal bonding
Bond2Bond™ Structural	2K Cyanoacrylate	Interior parts assembly	Up to 25 min	17%	14 MPa	Primerless, Long open time, Fast fixure time, Multiple substrates bonding

LIQUID ADHESIVES					
Products	Technology	Application	Application Temp.	Application Method	Technology advantages
COFIX/S	SB	Bonding	+15°C - +30°C	Spatula, roller or brush	PVC Flooring: Solvent based adhesive
Bostik 31	WB	Bonding	+15°C - +30°C	Brush & Trowel	PVC Flooring: Waterbased contact adhesive
Bostik STIX A470	WB	Bonding	+15°C - +30°C	Brush & Trowel	PVC Flooring: Waterbased contact adhesive

HOTMELT ADHESIVES					
Products	Technology	Application	Application Temp.	Application Method	Technology advantages
H9438	HMPO	Seats, Floor covering and Luggage Racks	+180°C - +200°C	Roll coater and slot die nozzle	High green strength, High temperature resistance
TLH 2211 E	HMPSA	Seats, Floor covering and Luggage Racks	+150°C - +180°C	Roll coater and slot die nozzle	Good balance peel and tack, High shear resistance and Can be foamed

BUTYL					
Products	Technology	Application	Application Temp.	Application Method	Technology advantages
B1183	Butyl	Side windows, Side panels, Emergency exits	Room Temperature	Rolls	Permanent plastic and permanent tacky, Excellent aging and weather resistance
B1590	Solvented Butyl	Side windows, Side panels, Emergency exits	Room temperature	Hand or compressed air gun	High sealing performance

ANAEROBIC ADHESIVES other grades availables*						
Products	Technology	Application	Viscosity	Fixture Time	Strength	Technology advantages
Born2Bond™ TA-43	Anaerobic	Threadlocking of bolt and nuts for requiring low strenght (disassembly using tools)	2.500-3.000 mPas	<15 min	25 Nm	Medium strength threadlocker, fast curing, oil tolerant, max. thread M36
Born2Bond™ TA-77	Anaerobic	Pipe sealing of hydraulics & water systems with wider diameters	80.00-90.000 mPas	60 min	11 Nm	Strong gap filling, Shock resistant, Fast pipe sealing, Max. thread M80
Born2Bond™ GA-10	Anaerobic	Gasketing of metal flanges in gearboxes, engines	40.000-140.000 mPa.s	<12 hours	<5 N/mm²	Instant gasket, high temperature resistance, vibration resistant
Born2Bond™ RA-38	Anaerobic	Retaining of bearings, hubs and shafts	2.000- 3.000 mPa.s	N/A	>25N/mm²	High power transmission, resistance to dynamic loads, vibration resistant

PRIMERS AND CLEANERS	
Products	Application
Cleaner I	An ideal cleaner for cleaning and degreasing of substrates
Prep C5	A one-step pre-treatment to improve adhesion to closed substrates
Prep G	A black pre-treatment to protect sealant from UV
Prep G+	A black pre-treatment for glass and non transparent substrates
Prep K	For activating surfaces (plastics, composites)
Born2Bond™ Pre-Bonding Cleaner	Cleaning of all kinds of substrates. Removes grease, oil, lubricants and other contaminants without leaving any residue

REPAIR		
Products	Technology	Application
XPU20102	2KPU	Aftermarket plastic repair for interior and exterior (bumpers, headlight brackets etc.)
Born2Bond™ Ultra MV	Cyanoacrylate	Aftermarket repairs (instant bonding of plastic, rubber, wood and metal parts of interior).
Born2Bond™ Flex	Cyanoacrylate	Applications for vibration and impact resistance, flexible and elastic bonding.
Born2Bond™ Repair	Cyanoacrylate	Fast repair and rebuilding adhesive. Grindable, paintable, and drillable within minutes. Gap filling.
SAF 101	MMA	Fast curing, high strength and sandable.

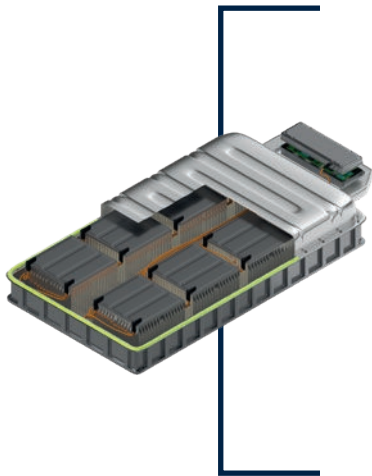
# Bostik is prepared for the future






Driven by climate concerns, e-mobility and the electrification of powertrains are at the core of this transition towards a sustainable future with battery as key technology.

Arkema group and Bostik are at the forefront of the technological and industrial transformation with its unique position all along the battery value chain, inside and outside of the battery cell. We help you to address the challenges of today's and tomorrow's batteries such as fast longer service life, improved safety, faster charging, reliable performance, cost and greater range.


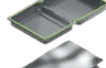


Bostik is committed to enhance battery performance with increased **efficiency, safety and reliability** with our **smart adhesives and sealants portfolio** for battery systems: from cell to module and battery pack assembly, thermal management, encapsulation of electronic components up to its vehicle integration onto the chassis.




## Cell to Module Assembly

-  Cylindrical cell to cell and cell to module bonding
-  Pouch cell to cell bonding
-  Prismatic cell to cell bonding



## Battery Pack Assembly

-  Sealing
-  Gasketing
-  Lamination for EMI Shielding
-  Structural bonding

## Thermal Management

-  Thermally Conductive Gap filler and Adhesive

## Encapsulation of Electronic Components

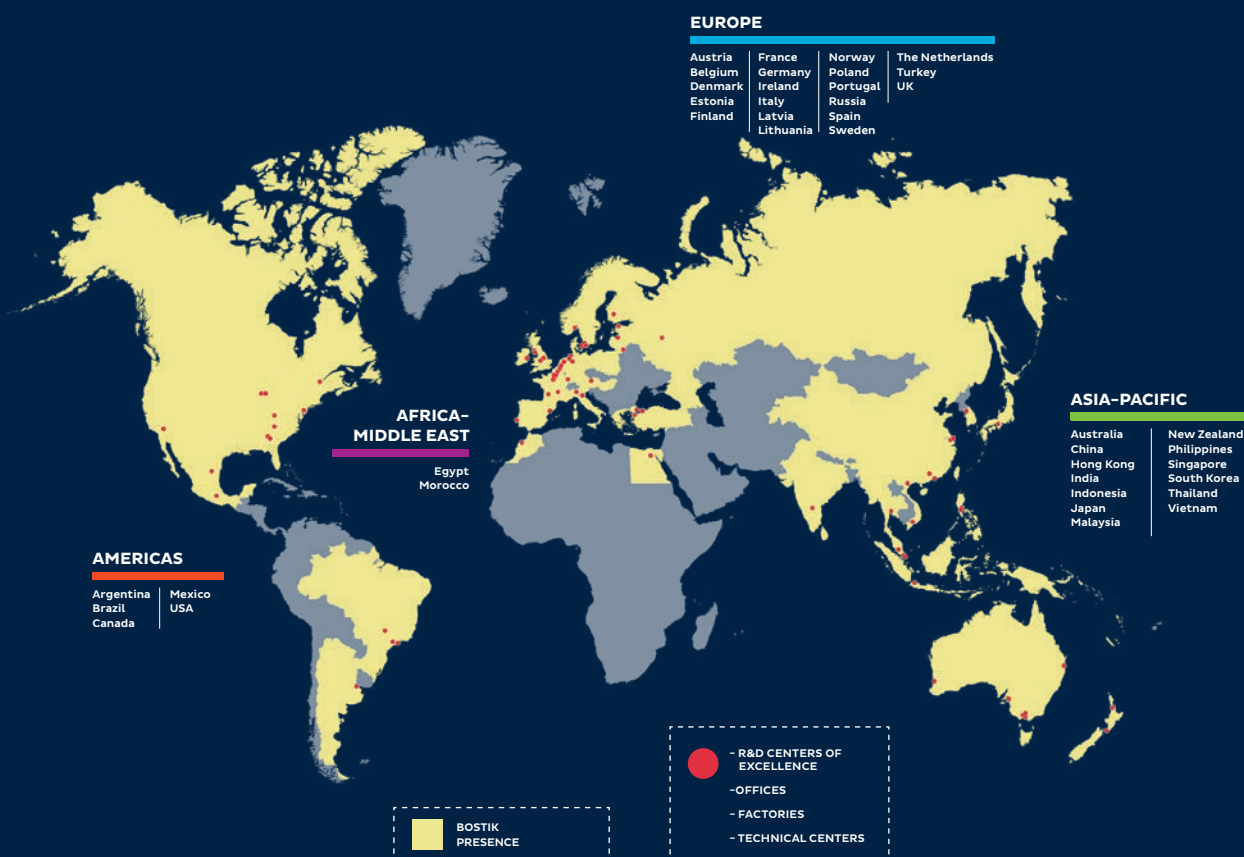
-  Encapsulation/LPM
-  Conformal Coating

## Vehicle Integration

-  Structural Bonding onto Chassis



# Smart Help: Please contact your sales representative.



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an Arkema company

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INNOVATIVE CHEMISTRY