



Driving the future of automotive solutions

INNOVATION THROUGH SMART ADHESIVES





Overview of bostik automotive solutions

INTRODUCING BOSTIK, YOUR SMART BONDING PARTNER

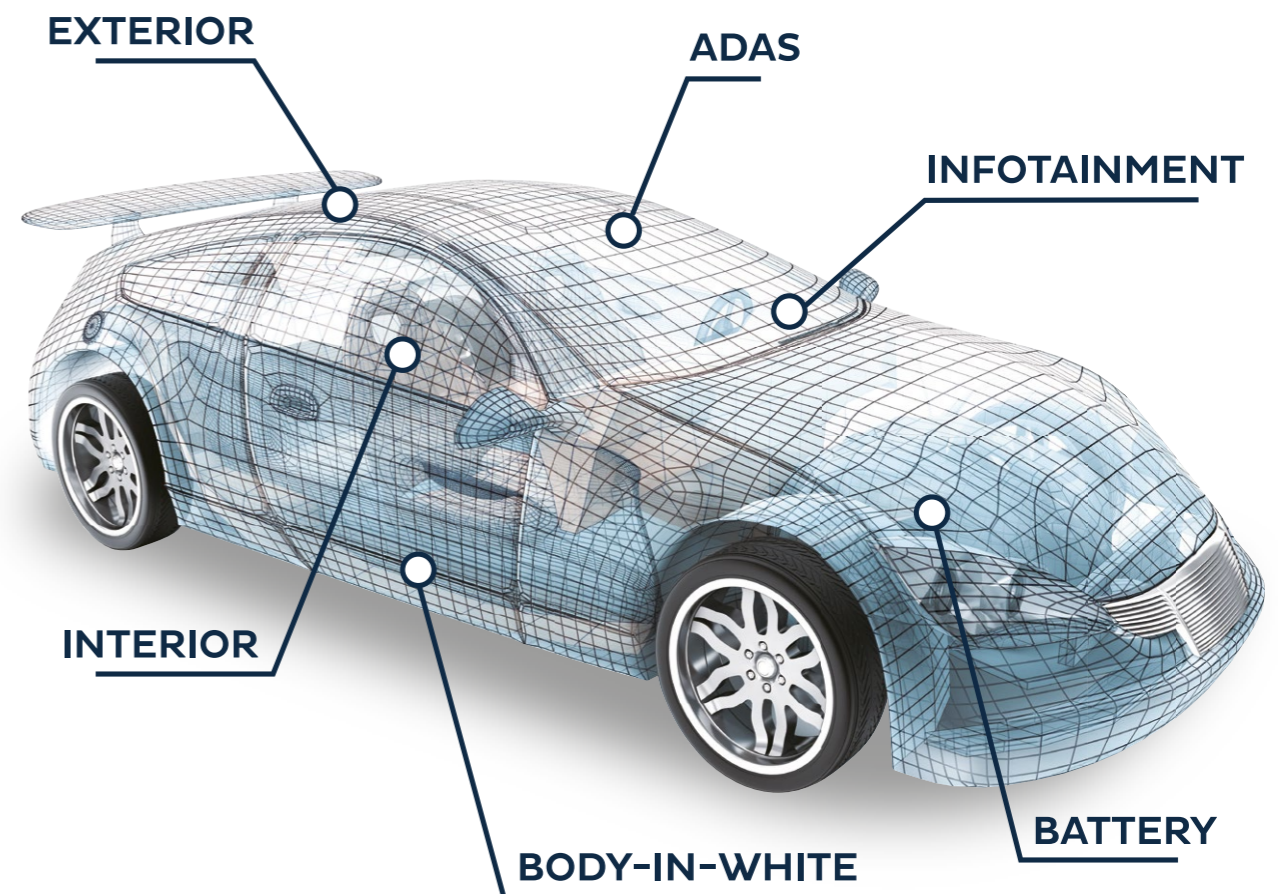
For over 130 years, Bostik, an Arkema company, has been a leading global adhesive manufacturer specialising in innovative bonding and sealing solutions for automotive interior, exterior and aftermarket applications. As the automotive market has evolved, so, too, have our technologies.

Bostik designs fast, efficient and trusted assembly solutions used by global automotive OEM's for both original assembly and aftermarket applications through their repair networks.

As an adhesives pioneer, we combine bold thinking and innovative ideas to create the smart adhesive solutions found in robotic automotive assembly lines across the globe.

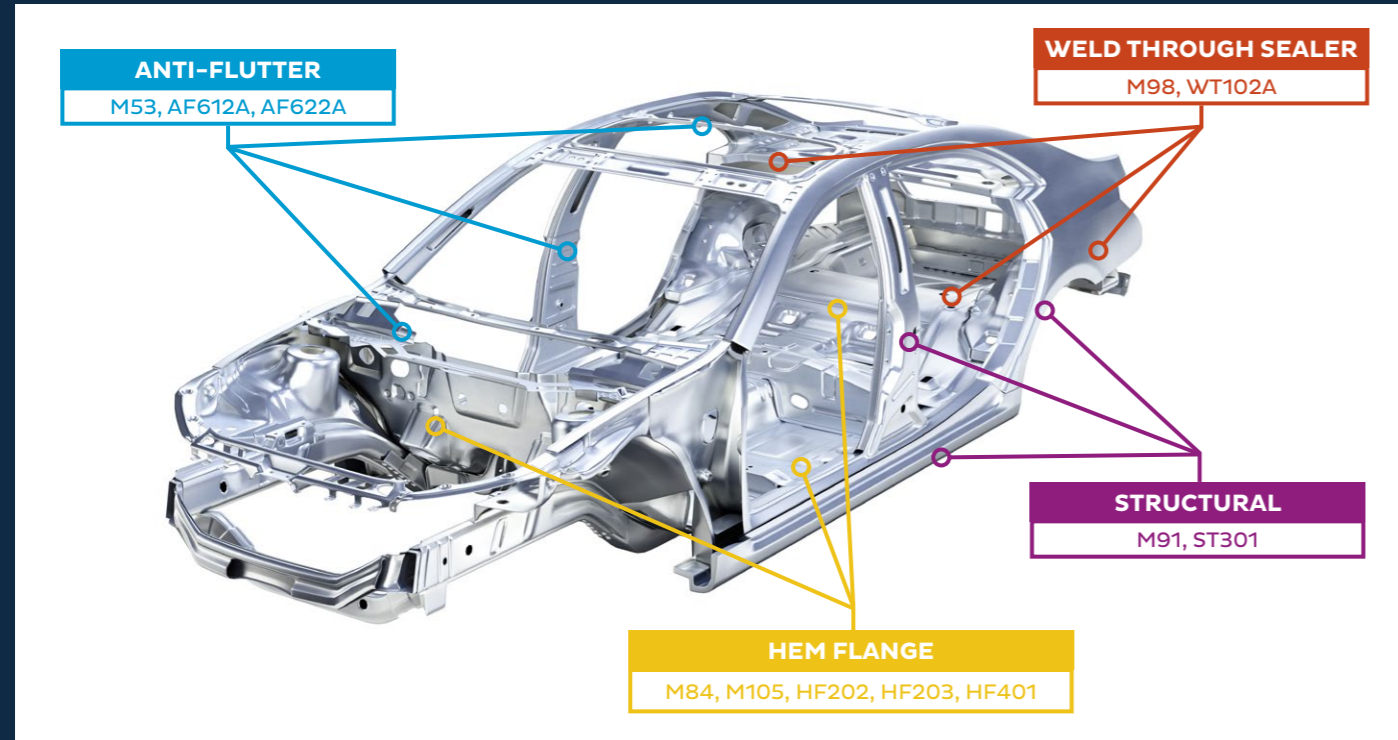
Our smart adhesives are defining the future of automotive assembly. Innovative and unique formulations like our isocyanate-free, silyl modified polymer technology (SMP) and hot melt pressure sensitive adhesive (HMPSA) are revolutionising the way automotive manufacturers assemble their vehicles.

Bostik's goal is to create and repair lighter, quieter and stronger vehicles through correct product selection and the optimization of manufacturer approved production and repair processes.



Body-in-white

Formulated for bonding lightweight, metallic substrates, Bostik's rubber-based elastosol and epoxy BIW solutions increase your design opportunities and simplify assembly processes. They can be applied either manually or robotically, depending on your specific production line needs, and improve process quality and efficiency.



PARTS	APPLICATIONS	ADHESIVES
Door, hood, tail gate, lift gate	Anti-flutter	M53, AF612A, AF622A
Door, hood, tail gate, lift gate, fender	Hem flange	M84, M105, HF202, HF203, HF401
Chassis, roof, side, floor	Weld through sealer	M98, WT102A
Assembly, A/B/C pillar, beam, chassis, threshold	Structural	M91, ST301

INNOVATIVE BONDING TECHNOLOGY

- Lightweight material compatible
- HSE-Friendly and safe for worker
- Process quality & efficiency
- Low temperature curing

Highly efficient technology :

- No "print-through"
- Product diversity for customers
- Tolerant towards lubricants / pre-lubes
- Strong corrosion protection



HEALTH AND SAFETY

- No solvent, free of volatile component
- Low odor and low VOC
- Bostik BIW products do not contain any solvents and material with low flash point.
- Bostik BIW does not release toxic corrosive emissions when welded through

DURABILITY

- Extremely good adhesive durability
- Best in class corrosion protection
- Good bonding performance on lubricants / pre-lubes.
- Good paint ability
- Tolerant Tolerant and versatile adhesive system with good bonding properties on most commercially available metallic substrates
- Long shelf life

Interior



Bostik's Hot Melt Polyurethane (HMPUR) and Water-Based Adhesive (WBA) adhesives are ideal for interior assembly applications, offering increased vehicle durability and improved overall vehicle performance. Key features include excellent initial strength, high bonding strength, plasticiser resistance, temperature resistance, as well as excellent VOC and odor performance.

SECTION	PARTS	APPLICATIONS	ADHESIVES
Headliner Attachments	Clips/Hooks/Ducts	GRFS, PP, TPO, Metal	HMPUR, APAO, PA
	Wire Harness/Hoses	Wire to Metal	HMPUR, APAO, PA
	Safety Foam	GRFS, PP, TPO, Metal	HMPUR, APAO, PA
	Stiffeners	GRFS	HMPUR, APAO, PA
Doors	Door Lamination	Fabric to Plastic	Reactive SBA, WBA, HM(PUR, APAO), Reactive PSA & PSA
	Speaker	Construction & Vibration	PUR Adhesive, Foam in Place
	Water-Shield	Sealing on Foam & Direct Sealing	Foamed MHPSA, Butyl
	Weather-Strip	Gap Filling & Flocking	Foamed MHPSA, Butyl
Floors	Load Floor	GRFS, EPP, PP	PE, HMPSA, HMPUR
	General Floor	Fabric to Various	HMPSA, Butyl, HMPUR

Interior

INNOVATIVE BONDING TECHNOLOGY

Hot Melt Polyurethane (HMPUR)

- Short open time
- Rapid crystallisation and drying after cooling
- Excellent bonding performance

Hot Melt Amorphous Polyolefin (HMAPAO)

- High safety performance
- Excellent bonding performance for substrates with low surface energy (such as PP & PE)
- Light color, with a relatively small influence on the bonding appearance

Hot Melt Pressure Sensitive Adhesives (HMPSA)

- Clean production, small environmental influence
- High sound insulation

Water-Based Adhesive (WBA)

- Solvent free and high initial strength
- Excellent wet heat circulation resistance
- Low activation temperature, long open time, easy operation
- Strong part positioning capacity

HEALTH AND SAFETY

Headliner Attachments

- Low VOC and Odor
- Solvent free

Doors

- Low VOC and Odor
- Limited smell emission

Floors

- Solvent free
- Low odor

DURABILITY

- Good resistance after different aging conditions
- Widely achieve OEM's specification
- Excellent plasticiser resistance



Exterior

Bostik develops safer, faster, more efficient structural bonding solutions for the automotive market. Its exterior adhesives allow for the quick and efficient processing of all automotive assembly fixtures.

PARTS	APPLICATIONS	ADHESIVES
Glass	Glazing, Attachments, Potted Parts	SMP
Hang-on-Parts	Vents, Accents, etc.	FIP, SMP, MMA
Lighting	Lamp Bonding, LED	MMA & HM PUR
Composite materials	Structural bonding	MMA & 2K PU

INNOVATIVE BONDING TECHNOLOGY

2 component polyurethane (2K PU)

- Lightweight & dissimilar materials
- Different thermal expansion
- Process quality & efficiency
- Durable assembly

Silyl Modified Polymer (SMP)

- Efficient process with automated equipment
- Primeless on most substances
- Elasticity in various temperature
- Fire retardant with UL 94 V0
- Excellent anti-weathering performance

Methyl methacrylate (MMA)

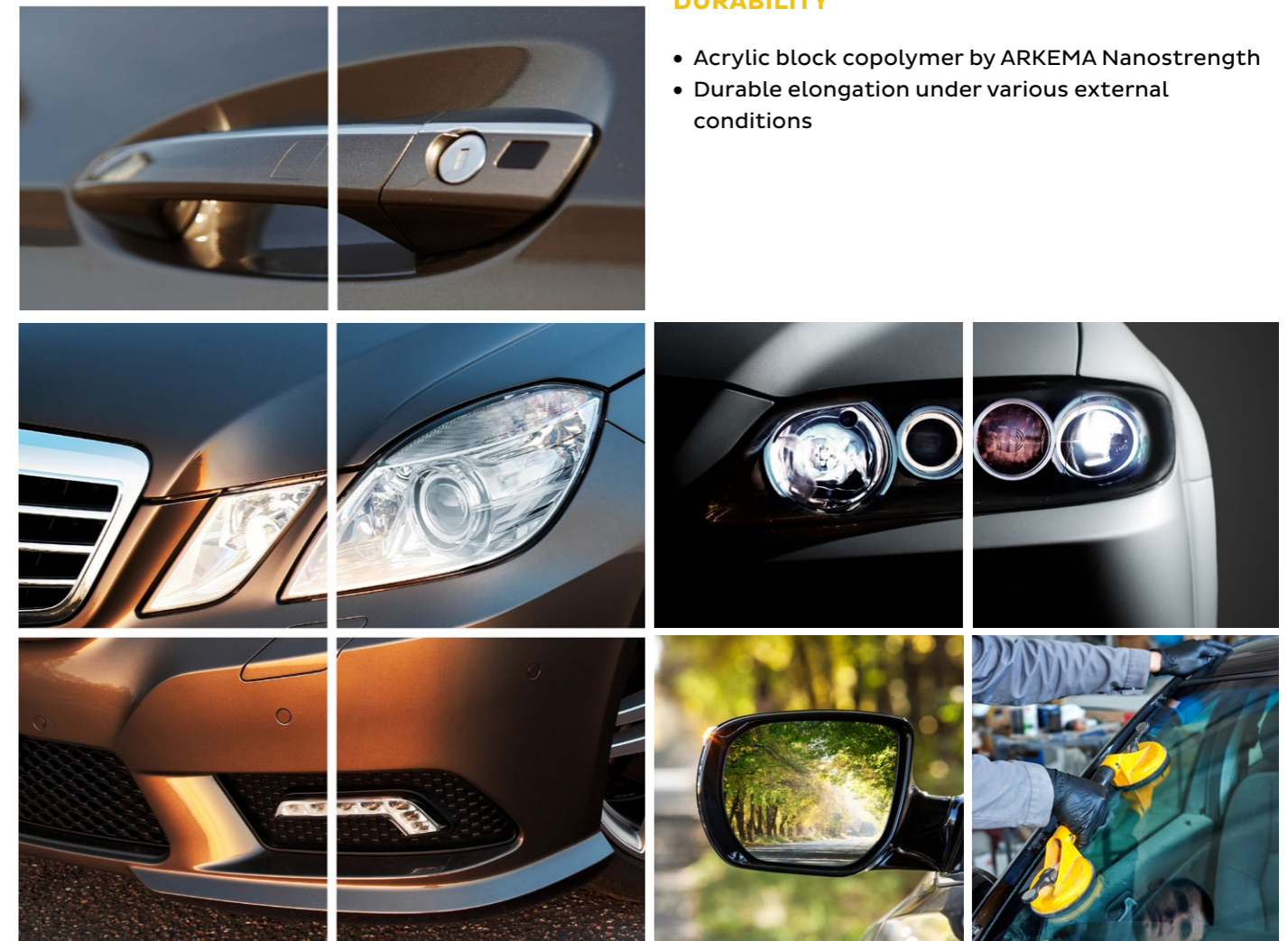
- Versatile adhesion properties
- High elongation up to 300%
- Thixotropic properties
- Fast room temperature curing
- Limited surface treatment
- Structural strength
- Humid cataplast performance

HEALTH AND SAFETY

- Limited irritating volatile materials

DURABILITY

- Acrylic block copolymer by ARKEMA Nanostrength
- Durable elongation under various external conditions





Battery

Bostik provides smart innovative solutions on cell-to-cell bonding, and PACK sealing. Our leading technology Silyl Modified Polymer (SMP) and Bostik patented solution in the form of UV Foam Gasket (UVFG) also provide quality solutions to meet customers' requirements.

Bostik's high temperature label solutions are used in consumer durable applications that include automotive battery labels. Our high temperature label solutions that include Hot Melt Pressure Sensitive Adhesive (HMPSA) for consumer durables, offer the high performance capabilities needed to withstand the harsh conditions of these applications. They pass the needed chemical resistance tests and exhibit superior bond strength.

PARTS	APPLICATIONS	ADHESIVES
Prismatic cell	Cell to cell bonding	2K PU
Pouch cell	Cell to cell bonding	HMPSA & WBA
PACK	PACK Sealing	SMP & UVFG

INNOVATIVE BONDING TECHNOLOGY

Hot Melt Pressure Sensitive Adhesives (HMPSA)

- Easy Spraying
- High efficiency, fast assembly
- Tiny impact on battery size by thinner adhesive

Silyl Modified Polymer (SMP)

- Efficient process with automated equipment
- Primeless on most substances
- Fire retardant with UL 94 V0

Water-Based Adhesive (WBA)

- Easy Spraying
- Good bonding on low energy surface
- Tiny impact on battery size by thinner adhesive

UV Foam Gasket (UVFG)

- Fast curing speed by seconds level
- Easy for re-workable
- Excellent sealing performance

HEALTH AND SAFETY

- Solvent free
- No hazard on operation process

BOSTIK KEY SOLUTION

Bostik can provide various solutions by technology, include MMA; 2K PU etc.

Improve battery pack performance from vibration and security properties.

Auto electronic (infotainment & ADAS)

Bostik's smart adhesive solutions for instrument panels responds to consumer preferences for environmentally friendly, sustainable solutions. Additionally, we help improve manufacturing processes by streamlining operational efficiencies and reducing plant downtime.

PARTS	APPLICATIONS	ADHESIVES
Navigation Panel	Edge bonding	HMPUR, CA
Speaker	Cone to frame bonding	HMPUR
Speaker	NVH protection	HMSBC
ADAS (ECU/Camera/Radar/Lidar)	Gasket	CIPG/UVFG
ADAS (ECU/Camera/Radar/Lidar)	Parts Bonding	CA

INNOVATIVE BONDING TECHNOLOGY

Hot Melt Polyurethane (HMPUR)

- Good bonding strength
- Simple process with fast bonding speed
- Reduce plant energy consumption
- Precise application with less material waste

Hot Melt Styrenic Block Copolymer (HMSBC)

- Enhance productivity
- Improve product consistency and reliability
- Foam-able with less material consumption

Cyanoacrylates (CA)

- Low odor, low blooming
- Instantly fixing
- Patented 2K and UV/dual cure products available

UV Foam Gasket (UVFG) and Cure In Place Gasketing (CIPG)

- Fast curing speed by seconds level
- Easy for re-workable
- Excellent sealing performance

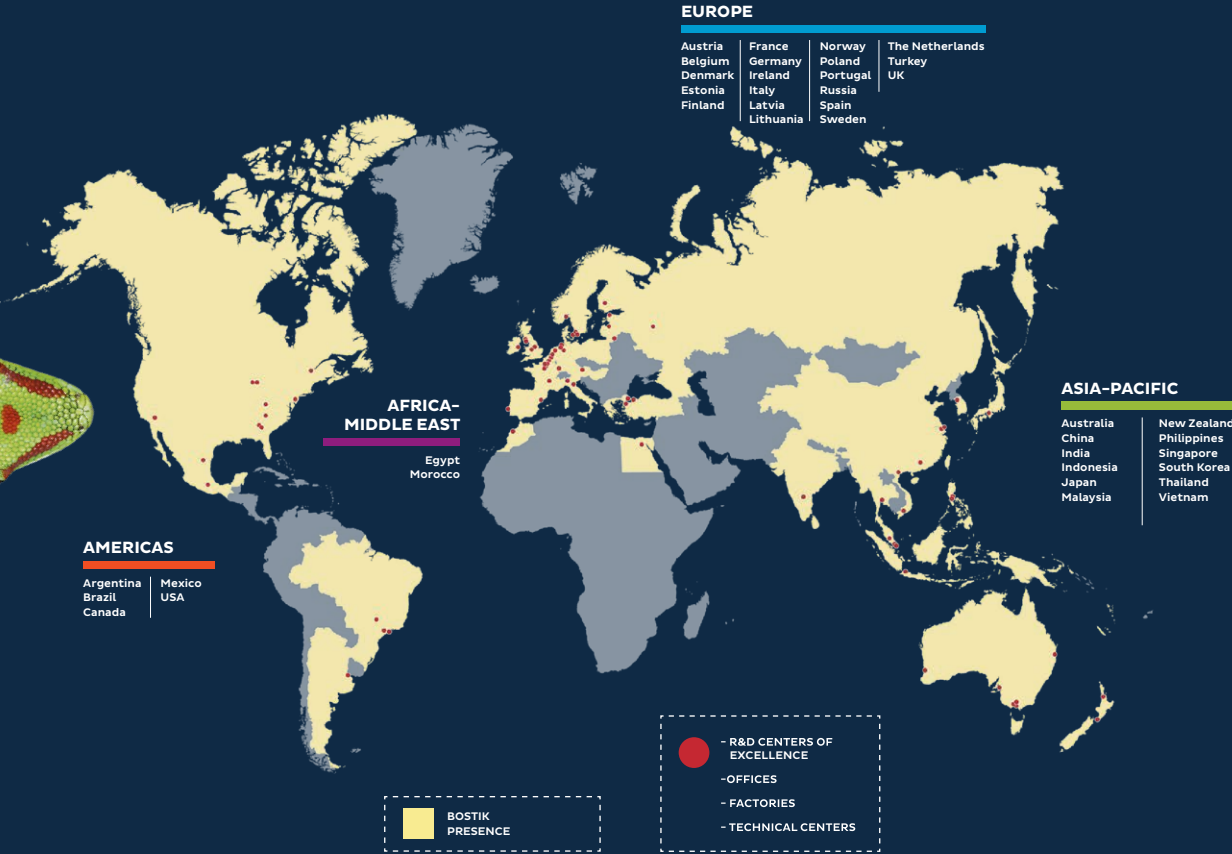
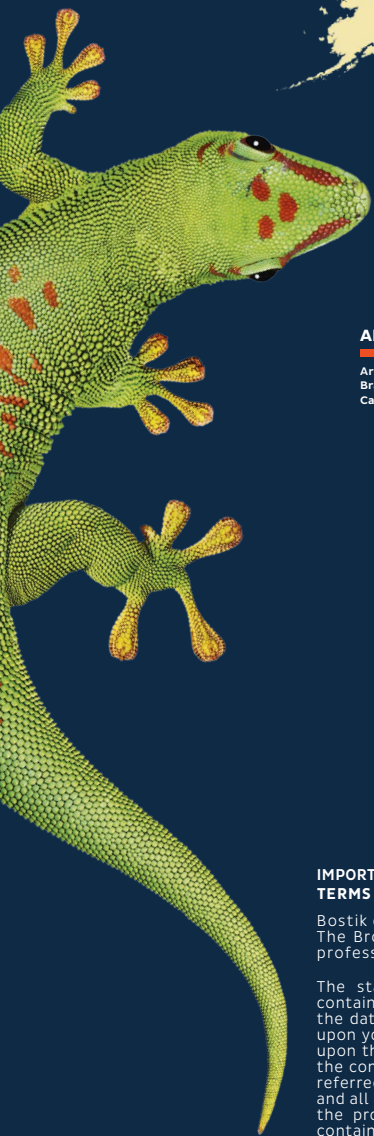
HEALTH AND SAFETY

- Environmental friendly product without polluting

DURABILITY

- Electronic solution with automotive specification
- Excellent damping performance
- Excellent mechanical performance after various aging tests





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