epsan

PRODUCT CATALOGUE

www.epsan.com

Who We Are

With nearly 50 years of experience, Epsan is a pioneering brand in the field of engineering plastics, developing innovative, reliable, efficient, and sustainable solutions. Serving industries that touch every aspect of life such as automotive, electrical & electronics, white goods, construction, agriculture, and furniture.

Guided by an environmentally friendly approach and strong R&D investments, Epsan shapes the technologies of the future while always prioritizing quality, sustainability, and innovation. With its strategic vision, the company delivers solutions that address not only today's needs but also those of tomorrow.

I Sustainability Epsan

At Epsan, sustainability is at the core of our business strategy. We continuously invest in innovative processes to reduce our carbon footprint and use resources more efficiently. Our production focuses on recylced and sustainable engineering plastics solutions that support a circular economy. Through responsible sourcing and energy efficiency practices, we contribute to climate action and a greener future.

In line with this commitment, we have published our **Sustainability Report** and proudly achieved a **Bronze Scorecard** in the EcoVadis Sustainability Assessment. With 50 years of experience, we remain dedicated to creating sustainable value for our customers, employees, and society.

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Sustainable Solutions

EPLON+

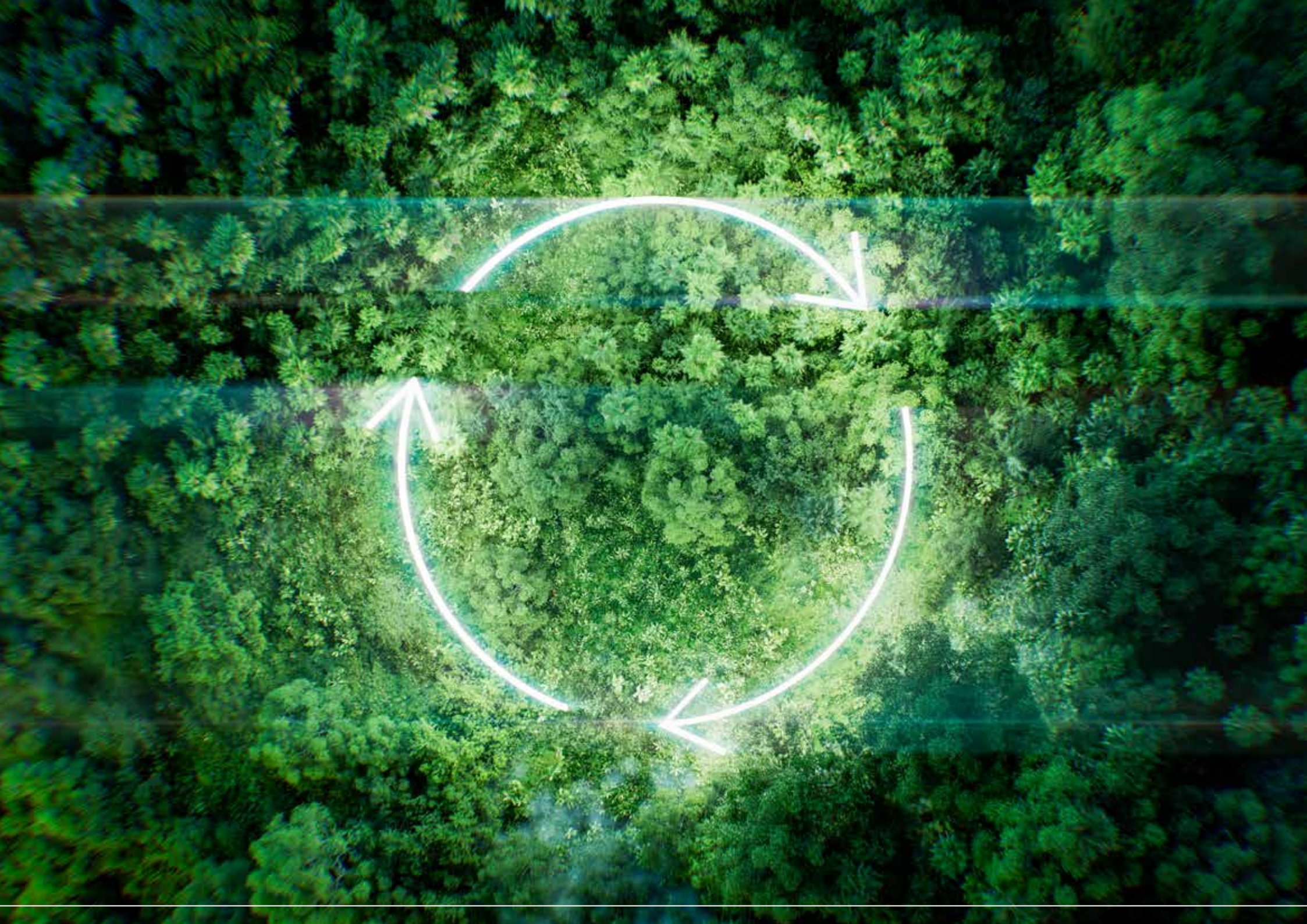
EPLON+ is a high-performance engineering plastic developed using recycled PA6 and PA66 from post-industrial textile and polymerization waste. While delivering the good quality as prime polyamide compounds, it achieves approximately 32% lower CO2 emissions on average compared to our premium product groups. This makes it an ideal solution for industries such as automotive, electrical & electronics, and consumer goods seeking sustainable production.

EPIMIX+

EPIMIX+ is produced from post-consumer recycled PET compounds, offering high strength, stiffness, and impact resistance. With advantages such as chemical resistance, excellent electrical properties, low creep at high temperatures, and low moisture absorption, it is particularly suitable for applications including connectors, exterior mirrors, door handles, rear wipers, and thermal management components.

EPLON+ and EPIMIX+ both have the Life Cycle Analysis (LCA) reports.

- EPLON+ 6 GFR 30 BK
- EPLON+ 6 GX0 30 BK
- EPLON+ 66 GFR 30 BK
- EPLON+ 66 GFH 30 HS BK
- EPLON+66 IMP BK
- EPLON+ 66 GV0 25 BK
- EPIMIX+ PBT/R-PET GF 30 BK



Automotive

The automotive industry is undergoing one of the most significant transformations in its history, driven by the rapid rise of electrification, stricter environmental regulations, and increasing consumer expectations for performance, safety, and sustainability. Today's vehicles must deliver more than mobilit they must combine efficiency, durability, and advanced functionality while supporting lighter designs and reduced environmental impact.

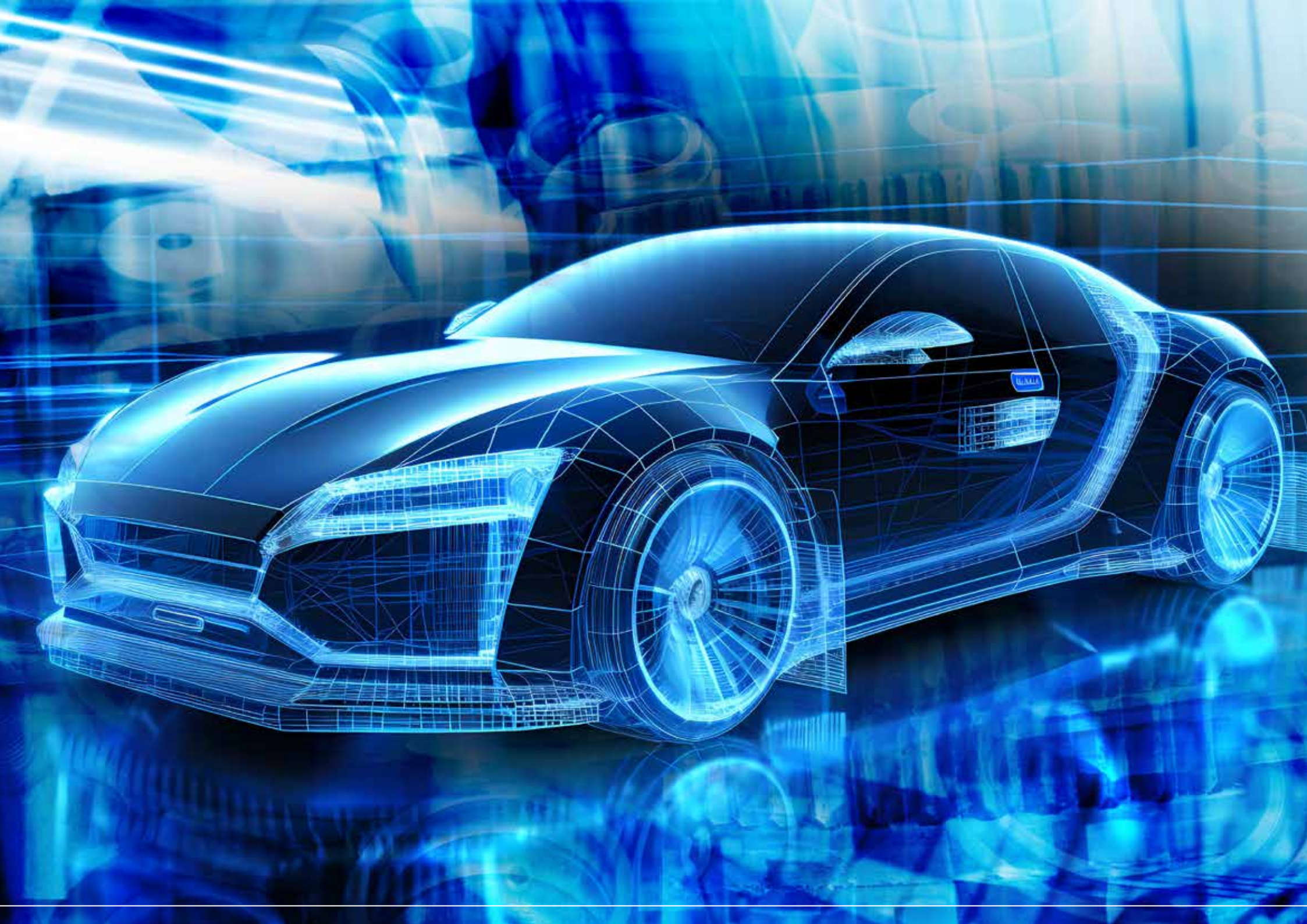
At **Epsan**, we partner with leading OEMs and Tier suppliers to deliver advanced polyamide-based materials that combine **mechanical strength** and **heat resistance** with a focus on **sustainability.** Our innovative compounds are designed to meet the challenges of modern mobility supporting e-mobility, reducing **noise and vibration**, improving **thermal management**, and ensuring **long-term durability** under extreme conditions.

Our portfolio also includes grades with outstanding **hydrolysis resistance** for cooling system components such as end tanks, thermostat housings, and water outlet connectors. With **fast flow properties of SPRINT,** our materials allow the production of thin-walled and complex parts eg. connectors, and sensor components, supporting design flexibility. In addition, excellent **heat aging resistance** makes our solutions ideal for **air intake manifolds**, **charge air coolers**, and **under-the-hood structural parts**, where high temperature and mechanical stability are critical.

Overall, our portfolio covers a wide range of interior, exterior, and under-the-bonnet (UTB) applications, such as pedal systems, mirror housings, engine covers, and other critical components. We continue to develop innovative materials that meet our customers' expectations for safety, quality, and sustainability.

We offer solutions for automotive applications with a proven track record:

- EPLAMID 6 GFR 30 BK Q2D002
- EPLAMID 6 GFR 35 BK Q2D503
- EPLAMID 6 GFR 50 BK Q2F002
- EPLAMID 6 GFR 30 BK Q2D002
- EPLAMID 6 GFS 60 HS BK Q2G001
- EPLAMID 66 GFH 30 HS BK Q3D001
- EPLAMID 66 GFS 30 HS BK Q2D002
- EPLAMID 66 GFS 35 HS BK Q2D506
- EPLAMID 66 GFS 50 HS BK Q2F002
- EPIMIX PBT GFR 30 BK Q1D0A301
- EPIMIX PBT GX0 30 NC Q1D0C001
- EPIMIX PBT/PET GFR 30 BK Q1D003



E-mobility

Epsan offers innovative engineering plastic solutions that enhance the safety, performance, and efficiency of electric vehicles. Our durable, high-temperature resistant materials are used in a wide range of critical applications, from battery systems to thermal management components.

For example, **EPLAMID 6 GX0 30 BK** (a glass-fiber reinforced PA6) provides exceptional durability for load-bearing parts such as relay boxes, cable carriers, and structural connectors; **EPLAMID 66 GX0 30** (a flame-retardant, glass-fiber reinforced PA66) combines fire safety with heat resilience, making it ideal for battery housings and thermal components; and **EPIMIX PBT/R-PET FR GF30** blends recycled PET with PBT and glass fiber to deliver both sustainability and mechanical robustness, perfectly suited for electronic modules and climate control systems.

In addition, our Orange Color Solutions ensure compliance with industry standards for high-voltage components, enhancing both safety and visibility in electric vehicles.

Furthermore, our compounds with superior **NVH (Noise, Vibration, Harshness)** performance contribute to quieter, more comfortable car rides. With these solutions, we contribute to a more sustainable, energy-efficient, and environmentally friendly future of mobility.

In addition, the laser markable **EPLAMID 66 GX0 30 ORNG** with distinct orange color (RAL code 2003) is used in parts such as high-voltage connectors, serving as a crucial safety feature and allowing traceability. **EPLAMID 6 GFR 30 LOV** and **EPLAMID 66 GFS 30** offer high voltage resistance, high dielectric strength, low conductivity, and excellent corrosion resistance.

Epsan’s flame retardant, laser markable, and NVH solutions are suitable for E-mobility applications

Prime Solutions:

- EPLAMID 6 GX0 30 BK Q1D0B601
- EPLAMID 6 GX0 30 ORNG Q1D0C201
- EPLAMID 66 GX0 30 BK Q1D0B801
- EPIMIX PBT GX0 30 NC Q1D0C001

NVH Solutions:

- EPLAMID 6 QT GFR 35
- EPLAMID 6 QT GFR 50
- EPLAMID 66 QT GFR 35
- EPLAMID 66 QT GFR 50

E&E

Epsan provides the electric and electronics industry with flame retardant engineering plastic solutions that enhance safety and deliver high performance. Our **UL-certified** material portfolio stands out with flame retardant properties, excellent thermal performance, and superior electrical insulation. These solutions are used in critical applications such as **circuit breakers, contactors, relays, and electrical connectors, terminal blocks** ensuring reliable operation under high thermal and electrical stress. They contribute to the development of durable products that meet safety standards while supporting sustainability goals. We offer Color, laser markable and transparent solutions for E&E applications.

We offer color, laser markable and transparent solutions for E&E applications.

Prime Solutions:

- EPLAMID 6 GX2 20
- EPLAMID 6 GX2 30
- EPLAMID 6 GX2 35
- EPLAMID 6 GX0 30
- EPLAMID 6 GV0 30
- EPLAMID 6 FX0
- EPLAMID 66 GX0 25
- EPLAMID 66 GX0 30
- EPLAMID 66 GX0 35
- EPLAMID 66 FX0
- EPLAMID 66 FV0
- EPLAMID 66 GV0 25
- EPIMIX PBT GV0 30
- EPIMIX PBT GX0 30
- EPIMIX PBT/PET GX0 30

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Household & Appliance

Epsan provides high-performance engineering plastics for the home appliances and small household devices industry. Our lightweight and durable materials, resistant to heat, chemicals, and mechanical stress, deliver energy efficiency, safety, and design flexibility. Key applications include **EPLAMID 66 GFR 40** for ovens, washing machines, dryers, and dishwashers; **EPLAMID 6 GFR 60 NC** for washing machine flywheels; **EPIMIX PBT** for air fryers and toaster housings; **EPLAMID HT00 GFR 40 FW** for coffee machine components; and **EPLAMID 6** for food processor gears. With these solutions, we enable innovative and sustainable products that make everyday life easier.

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Building & Construction

Epsan provides durable and high-performance engineering plastics for the construction industry. Our materials resist harsh environments and mechanical stress, supporting sustainable and energy-efficient buildings. Key applications include **thermal breaks, fixing equipment**, **cable glands, and load-bearing parts**, enabled by advanced grades such as **EPLAMID 66 GFS 25 HV BK** and **EPLAMID 66 GX0 25 RP.**

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Other Industries

Sports & Leisure, Furniture, Agriculture and Others

Epsan provides high-performance engineering plastic solutions tailored to the specific needs of the furniture, agriculture, railway, defense, sports equipment, and various other industries. Our materials stand out with properties such as **high impact strength, UV resistance, chemical durability,** and dimensional stability.

These features enable design freedom and aesthetic solutions in the **furniture sector,** while delivering long-lasting and efficient performance under harsh conditions in agriculture. For **sports and winter equipment,** our solution **EPLAMID 6 GFI 30** offers durability, strength, and reliability under challenging conditions.

In the **railway industry,** our solution **EPLAMID 6 GV0 30 BK** and our flame-retardant grades comply with **UNECE R118 standards** for wheeled vehicles and **EN45545-2 European Railway** standards, ensuring safety and reliability.

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NEW INNOVATION

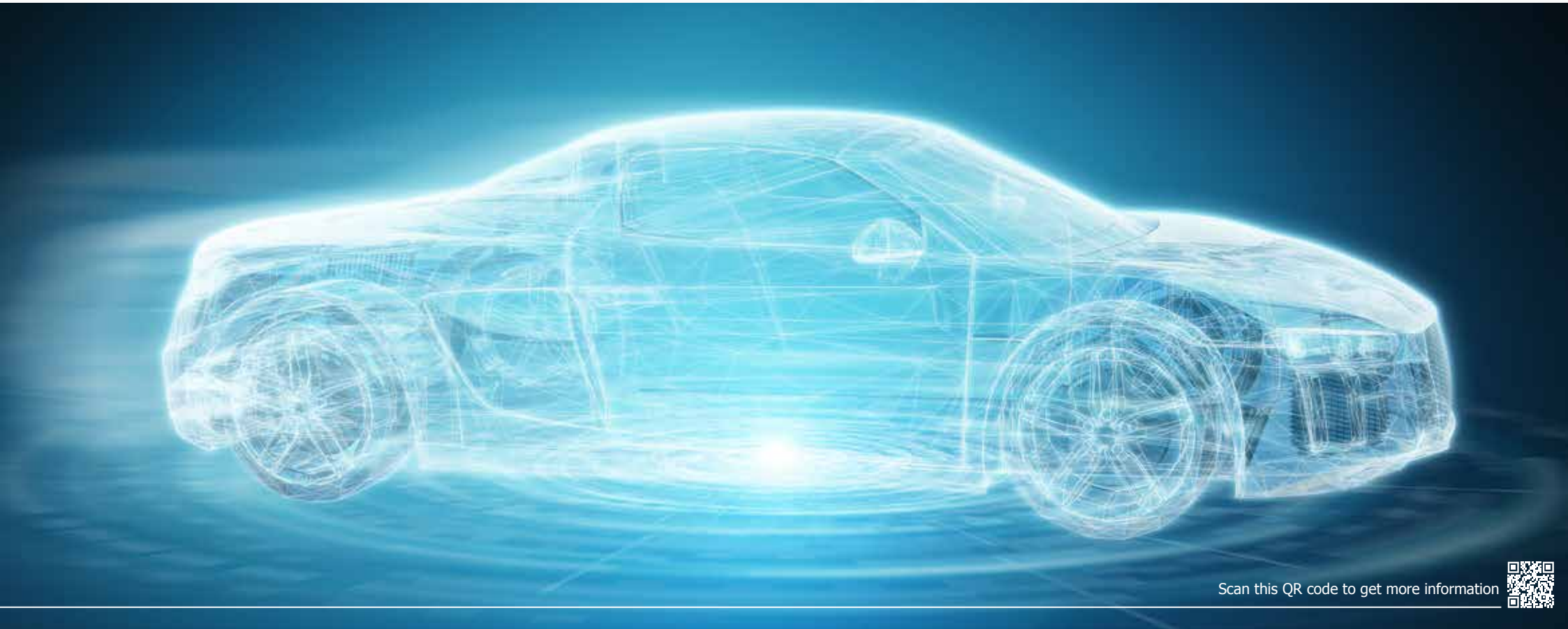
NVH

As electric vehicles reduce engine noise, other noise sources and vibrations become more noticeable, making NVH performance essential for passenger comfort and ride quality.

Epsan's engineering plastics with internal damping properties help by:

- Absorbing vibrations
- Enhancing ride quality
- Improving durability

Key solutions include Eplamid 6 QT and Eplamid 66 QT, which not only provide structural strength and long-term durability but also deliver excellent damping performance for demanding automotive applications.



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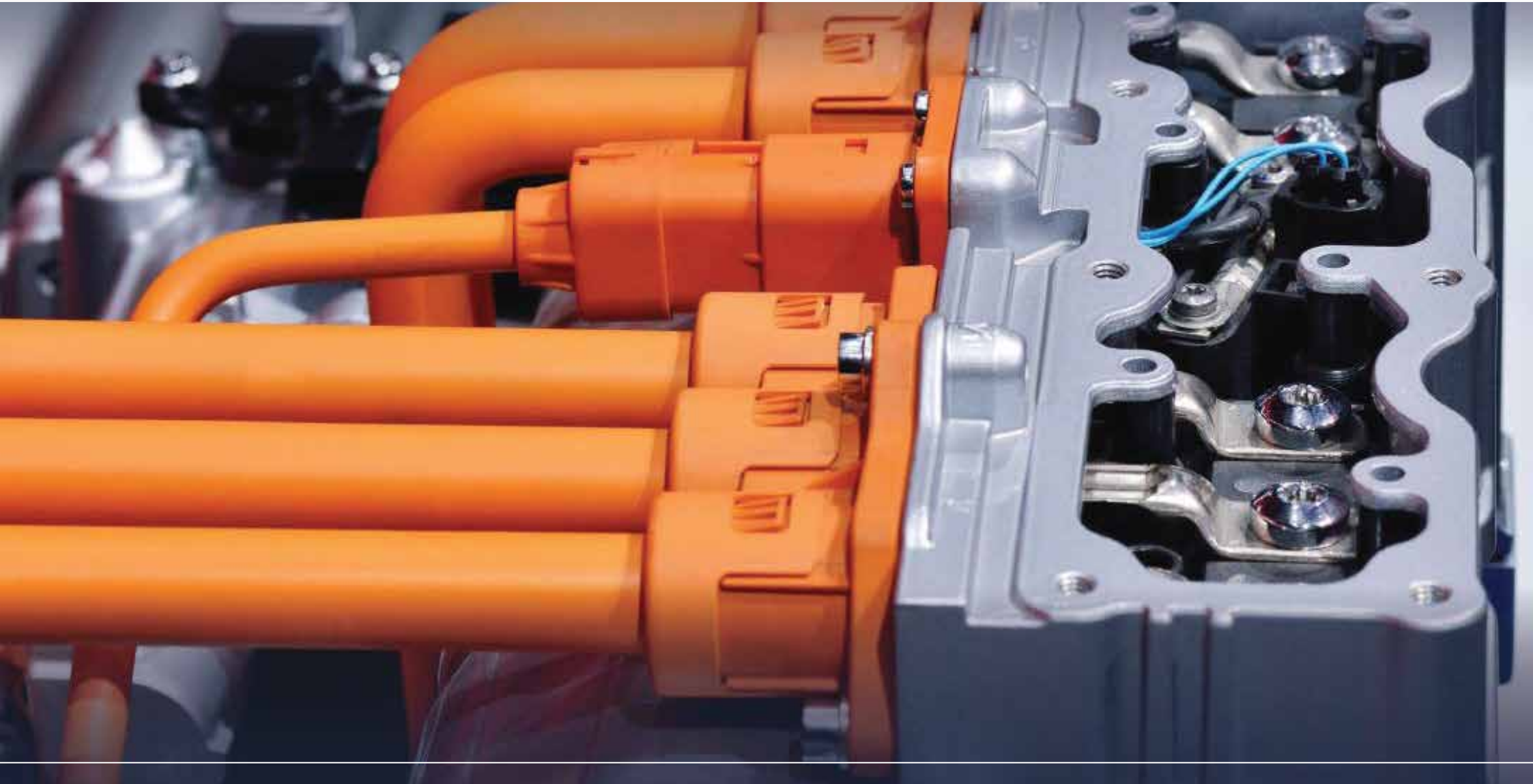
Orange Colour

Epsan offers advanced orange coloring solutions designed specifically for e-mobility applications, ensuring long-lasting color stability even under high heat and harsh conditions. Our products such as **EPLAMID 6 GX30 ORNG** and **EPLAMID 66 GX30 ORNG** combine excellent thermal aging resistance with flame-retardant properties, maintaining the vibrant **RAL 2003, 2008, and 2011** shades required for safety identification. With superior durability and compliance with industry standards, Epsan's orange grades deliver both performance and safety for next-generation mobility solutions.



Laser Markability

Laser marking is a process that uses a focused beam of light to create permanent marks on the surface of a material. This method is highly precise and can produce detailed designs, text, and codes without physically contacting the application.

Epsan provides engineering plastics with excellent **laser markability**, delivering permanent and high-contrast markings for industrial applications.

Our solutions offer reliable solutions for circuit breakers, electrical components and industrial parts.

- EPLAMID 6 GX0 30 LM GRY
- EPLAMID 6 GX0 30 LM BK
- EPLAMID 6 GX2 20 LM BLUE
- EPLAMID 66 GX0 30 LM ORNG

Epsan developed a new grade **EPLAMID 6 GX0 30 ORNG Q1D0C201™ RAL 2003** color which is also laser markable.

In the rapidly evolving e-mobility sector, safety and traceability are essential, especially in high-voltage applications. The distinct orange color of the material in these applications serves as a crucial safety feature, signaling the presence of high voltage and ensuring that the components are easily identifiable during manufacturing, assembly, and maintenance processes.

Furthermore, incorporating laser marking capabilities into these connectors enhances traceability and compliance with industry standards. This can be used in serial numbers, batch codes, and safety symbols remain legible throughout the product’s lifecycle.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Laser Transparency

Epsan offers advanced laser transparency solutions designed for industrial and automotive applications, ensuring reliable performance in laser welding processes. **Eplamid 6 GFR 30 LT BK** stands out with high laser transmission and balanced mechanical properties, while **Eplamid 66 GFH 30 LT BK** provides long-term heat and hydrolysis resistance, making it ideal for under-the-hood components. These solutions deliver excellent welding efficiency and long-lasting durability.

EPSAN's **LT (Laser Transparency)** series provides an optimized solution for laser transmission welding applications. These high-performance materials play a critical role in improving the efficiency and precision of laser welding, offering manufacturers a cost-effective and resource-friendly solution for producing small components with complex geometries. Our laser-transparent products ensures seamless integration with laser-absorbing components, enabling the transmission of high-powered laser beams to melt and join materials with unmatched accuracy.

With the launch of these laser-transparent products, EPSAN aims to empower manufacturers to enhance their production capabilities, reduce costs, and achieve faster turnaround times for complex welding projects. The innovative solution promises to redefine the future of laser welding applications, providing unmatched performance, durability, and value.

- EPLAMID 6 GFR 30 LT BK Q2D001
- EPLAMID 66 GFH 30 LT BK Q3D001

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MuCell Technology

MuCell® Technology is an innovative foaming method that enables **10–20% weight reduction, material savings, lower processing pressure,** and a **reduced carbon footprint** as a result. The technology is applied in automotive parts such as center consoles, engine covers, and dashboards.

Our solutions enable **lightweighting** (10–30% lighter parts with full mechanical integrity), deliver **material and cost savings** through reduced polymer use, improve dimensional stability by minimizing sink marks and stresses, support sustainability by lowering CO_2 emissions, and offer greater **design freedom** with thicker, low-warpage parts for innovative applications in automotive, e-mobility, and electronics.

Epsan's solution **EPLAMID 6 M BK9005** is suitable for the Mucell Technology.

NEW GROWTH FOCUS TOPICS

Coloring

Coloring

We specialize in providing customized colored raw material solutions to meet our clients' unique needs. Our expert team employs advanced technologies to produce high-quality, **flame-retardant colored** plastic raw materials, which are particularly suitable for use in electric vehicles (EVs). With our extensive color range, we support the design and production processes in the best possible way.

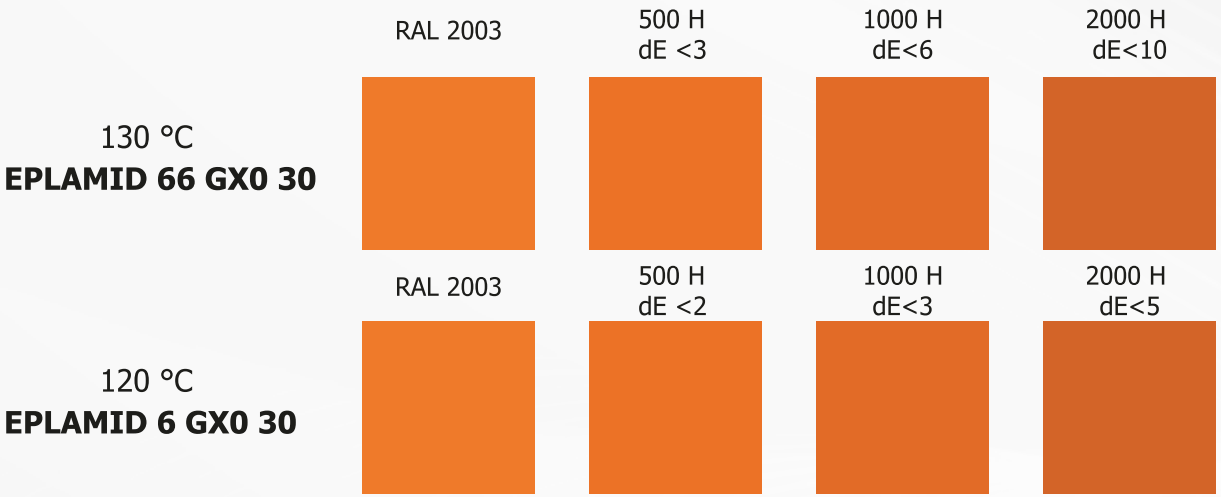
We also have an OEM-approved color specialist. This enables us to develop precise color solutions that meet the stringent standards of the automotive industry.

Heat Aging Orange Solutions

The polymer materials denoted as "Orange Colored," has witnessed a remarkable surge, particularly within the rapidly expanding electric vehicle (EV) sector. Materials in orange color have been designated as a distinctive color, particularly for numerous components such as connectors. Essential requirements, including **heat aging** and **flame retardancy**, are readily available.

RAL 2003, RAL 2008 and RAL 2011 are available.

The target is dE<10 after 2000 hours heat aging:



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Sprint Grade

Epsan's Sprint Grades are high-performance polyamide compounds that deliver up to 80% better flow compared to standard grades, while still maintaining excellent mechanical and thermal properties. Thanks to this enhanced flow, parts can be molded more easily and efficiently, which is especially valuable for thin-walled components and complex geometries.
They are especially used in applications.

- EPLAMID 6 SPRINT GFR 30
- EPLAMID 6 SPRINT GFR 50
- EPLAMID 6 SPRINT GFR 60
- EPLAMID 66 SPRINT GFS 50

Hydrolysis Resistance

Epsan's **Hydrolysis Resistance** solutions ensure outstanding durability even under high temperature and humidity, extending product lifetime. They deliver reliable performance in demanding applications such as automotive cooling systems, pumps, and valve components. Our portfolio includes **EPLAMID 66 GFH 30 HS BK** and **EPIMIX PBT GFH 30**, which stand out as key solutions for long-term durability and safety.

EPIMIX PBT GFH 30 shows excellent thermal shock resistance under specified USCAR2 test conditions.

EPIMIX PBT GFH 30 shows excellent retention at Class 3 and Class 4 test conditions which is significant for high temperature and humidity environments for automotive connector parts.

With their proven reliability, GFH grades are the ideal choice for coolant-carrying parts such as quick connectors and water inlet or outlet housings, guaranteeing long-term performance and safety in demanding engine environments.

Heat Aging

Epsan's Heat Aging solutions ensure long-term reliability by maintaining mechanical properties under continuous high-temperature exposure. These materials are ideal for applications exposed to heat, such as automotive under-the-hood parts and electrical components.

Our portfolio includes **EPLAMID 66 GFH 30,** and **EPLAMID 66 GFS 30,** offering outstanding heat resistance and durability.

We are committed to advancing material science to meet the rigorous demands of applications requiring high thermal resistance. Our dedicated research and development efforts focus on creating product groups that can withstand temperatures of up to 180°C ensuring exceptional performance in extreme conditions.

Epsan's heat-resistant product groups are designed to maintain their strength and performance at temperatures **up to 180 °C**, making them ideal for demanding high-heat applications. With customized heat aging solutions tailored to specific needs, they deliver reliable performance under both long-term and short-term heat exposure.

Rigorously tested for durability, these materials are especially suited for under-the-hood automotive components and other environments where prolonged high temperatures are critical.

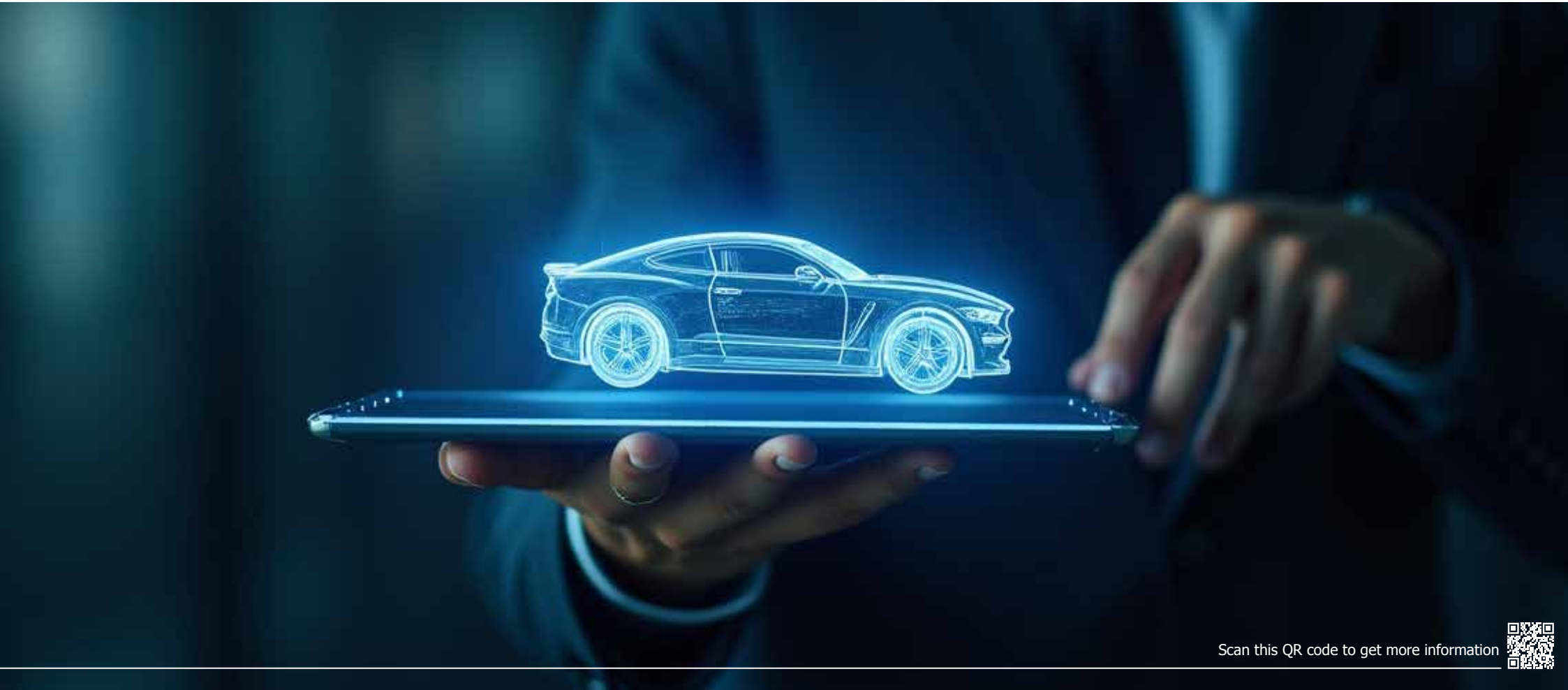
- EPLAMID 66 GFH 30
- EPLAMID 66 GFS 30

High Performance Polyamide: PPA

Epsan's high-performance polyamide series **EPLAMID HT** is designed for demanding engineering applications. With l**ow moisture absorption, high heat resistance** (continuous use at 140°C), **superior hydrolysis resistance**, and **minimal creep**, it ensures durability in harsh environments.

It is ideal for automotive components (coolant pumps, air cooling housings, water outlets), electric & electronic connectors, and household appliances requiring long-term thermal and hydrolysis resistance.

- EPLAMID HT00
- EPLAMID HT02



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