



DRIVING IDEAS

Innovative plastics solutions
for the automotive industry







HOP IN.

Welcome to ALBIS. With one of the broadest plastics portfolios in the world, we are highly accomplished technical experts and independent consultants for all matters relating to plastics. Our relationship with the automotive industry goes back for decades.

In addition to distributing Europe's leading plastics brands, we develop and produce our own special technical plastics. Our technical polymers feature in millions of vehicles, from illuminated interior trim strips through to permanently flexible exterior seals all the way to the crankshaft flange exposed to high thermal loads.

Thanks to our excellent knowledge of the plastics and automotive industries, we can offer comprehensive and unique expertise. Expertise that we can place at your disposal in our capacity as technical consultants. Expertise in the development of innovative plastics solutions for all automotive applications, cost-efficient component concepts and fresh design inspirations for vehicle interiors.

Whether it's lightweight design, high-quality styling without painting or ambient illumination – this brochure provides an overview of how we can find a solution for each of your challenges.

START YOUR ENGINES.

Admittedly it doesn't take an expert to recognize that energy efficiency is a key issue for the automotive industry. On the other hand, not every material supplier is capable of discussing with you the challenges of future design trends. Or of providing creative input for saving weight in the powertrain.

But then we are not just any supplier. We are ALBIS. Our technical consultants, product developers and business development managers are closely involved in the automotive sector. We exchange information on a continuous basis with design departments at OEMs and tier 1 companies. We also hold regular discussions with engineers, material experts and designers from the major manufacturers.

With over 30 highly qualified employees involved in product development, we possess the skills and the drive to push forward material innovations across the entire spectrum of thermoplastic polymers. With experience, know-how and, of course, the staying power required to see a product through to start of production maturity.

We have the answers to tomorrow's questions, today.

We don't just apply our expertise when called upon to do so. As a result of our intensive engagement with the challenges of your industry, we are also actively engaged in driving the development of technical plastics solutions for the automotive sector ourselves.

Crankshaft flanges made from TEDUR with an injected shaft seal, which are now widely used, are just one example of our pioneering work. The metallic-look engine covers that have proved so popular for many years can also be attributed to our initiative.



INTERIOR

- ALCOM® LIGHTING** for instruments, control buttons and other E&E applications
- ALCOM® WEAR PROTECT** functional parts exposed to tribological load
- ALTECH®** for uncoated trim parts with matt or high-gloss surfaces
- ALCOM® TCE / TCD** for thermal management applications

UNDER THE HOOD

- ALTECH® NXT PP** for components in the area of engine cooling and as a replacement for PA6 (lightweight design)
- ALTECH®** Recycled material e.g. for engine covers
- ALTECH® PA** heat stabilized for components with high thermal requirements
- TEDUR®** for valves, assemblies and precision components that are exposed to high thermal and/or chemical load
- TEDUR®** as a metal replacement (lightweight design)
- ALFATER®** for air ducts and 2 K hard/soft mouldings

EXTERIOR

- ALCOM® LIGHTING** for front and rear lights
- TEDUR®** for metallized reflectors without pretreatment
- ALFATER®** for injection-molded and extruded seals and profiles



FULL THROTTLE.

What we call “special plastics” in very general terms are often the solution to a problem that you have long been aware of. A component is too heavy or too unstable. A surface is not sufficiently resistant to warping or scratches. A color value cannot be reliably achieved. As an experienced compounder, we will get to grips with these problems with versatility, flexibility and, of course, with new plastic compounds.

We relish unusual, complex and seemingly impossible challenges. We develop solutions for special cases and fill in the little gaps that appear in the bigger picture of mass production. Be it in record time to solve an emergency, or for a period of years supporting the development of a new model series – if called upon, we develop formulations for the most minute, localized or even once-off applications.



HOW A SMALL LIGHT BECAME A BIG IDEA.

It all started with a tiny problem: Back-lit symbols in the center console are supposed to create a homogeneous appearance for all occupants – from tall drivers to small passengers. The OEM specification called for high contour sharpness, a wide viewing angle and uniform illumination even at low luminous intensities.

Not only did we hit on an elegant solution (a new compound with excellent dispersion characteristics and low transmission losses). We also laid the foundation for an entire range of lighting products. **ALCOM Lighting** now covers a complete portfolio of special products and is continuously opening up new areas of application that extend from simple switches to styling-oriented interior lighting.

NOT EVERYTHING THAT GLITTERS IS PAINT.

For a long time, there was only one way to combine the attractive appearance of metal with the technical characteristics of plastic: metallic paints. We have a better idea: **ALCOM Metallic Effect** based on the most diverse thermoplastics. The colored compounds not only look fantastic, they also deliver significant cost savings when the parts are manufactured and ensure better environmental compatibility because time-consuming painting is eliminated.

- Premium metallic appearance
- Numerous possible color variations
- Free of flow lines
- No additional painting required
- No pre- and post-treatment
- No additional logistics



WHERE METAL CAN NO LONGER COPE, WE COME INTO PLAY.

A material with properties that outperformed those of aluminum was sought for the casing of a driver assistance camera. To minimize vibrations, the material had to be as stiff as possible. In addition to low water absorption and minimal expansion due to heat, the requirements specification listed the possibility of cutting fine thread into the material later on.

In the end, our linear PPS **TEDUR** offered a convincing performance in all criteria. High flowability and a wide processing window make it a particularly suitable material for complex applications. Not only do the end products easily withstand the physical and chemical load in the engine and chassis area – they are also significantly lighter than comparable metal designs.

STAYING COOL WHEN THE HEAT IS ON.

Electronic equipment and high temperatures don't go together – the accumulation of heat is and remains the primary cause of failure in electronic circuits. In the complex assemblies fitted to modern vehicles, the capabilities of metal as the traditional means of dissipating heat are rapidly exhausted: Metal is too heavy and cannot be molded into the optimum shape. **ALCOM T-Conductive** on the other hand combines high heat dissipation with reduced weight and greater design freedom – and can either be electrically conductive or insulating.

- Efficient heat dissipation
- Prevents hot spots
- Increased lifespan and protection for sensitive components
- Performance gain
- Design freedom



YOU CAN'T ALWAYS HAVE EVERYTHING. EXCEPT WITH US.

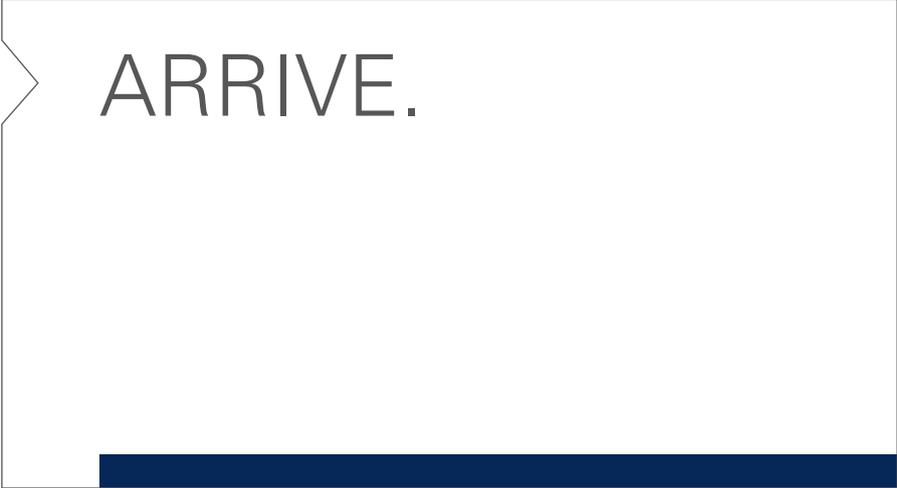
Heat, vibration, lubricants – not only must an engine cover take a great deal of abuse, it must also look good. If the requirement for a cost-effective material that possesses excellent environmental characteristics is added to the list, the challenge seems almost impossible.

Almost. In the end, we successfully mastered it. We developed a sustainable **ALTECH** polyamide that is manufactured 100% from recycled plastics and still meets all of the above requirements. Although the recycled materials originate from various different preliminary processes, our product meets constant high technical and optical requirements with an extremely high surface quality.

GRIP THE SURFACE TO GRASP THE CONCEPT.

Good interior design not only flatters the eye, it also pampers the hand of the driver. That's why our product range includes **ALFATER** for soft-touch surfaces that offer excellent grip. The thermoplastic elastomer combines many properties otherwise only found in rubber. Unlike rubber, however, it can be processed thermoplastically – and therefore significantly more economically – it's also easier to recycle. The material is used for flexible connections, seals or for noise reduction applications.

- High flexibility from -40 to +125 °C
- Exceptional long-term aging stability
- Low density of 0.90 to 0.98 g/cm³
- Good resilience
- Easy to process
- Design freedom



ARRIVE.

We are fully prepared for the next generation of automotive plastics innovations. Our understanding of plastics extends down to the minutest detail. We have decades of experience and excellent contacts in the automotive industry. Our highly-motivated team of developers is standing by. And our passion knows no bounds.

Now there's only one thing missing: You.

If you see yourself or your challenges described in this brochure, then contact us. Let's put our heads together to develop the next and subsequent plastics innovation in the areas of lightweight design, sustainability or styling and to drive forward the market for mobility.

All your questions on all aspects of automotive plastics solutions can be addressed to our central point of contact.

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Of course, you are also welcome to call our offices or your local contact at any time. For a complete contact list including all ALBIS sales offices as well as our subsidiaries worldwide, please visit www.albis.com

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