

# ADVANCED MATERIALS

## At a glance

We strive to ensure the efficient use of resources and to protect the environment. This is a common thread that runs through the technologies, process solutions, and applications of the Advanced Materials (AM) business. Lightweight components made of aluminum that reduce car fuel consumption are manufactured on production cells from our Die Casting business area; vacuum-coated architectural glass for building facades produced on systems from Leybold Optics make buildings more energy-efficient; and battery electrode slurry produced on Grinding & Dispersing equipment increases the range of electric vehicles.

The spectrum of applications covered by the three business areas is wide. It ranges from ultra-fine-grade pigments for analog and digital printing inks, to pastes for electronic components as well as components for cosmetics and agrochemicals, to electrode slurries for lithium-ion batteries. With our technologies, our customers produce coatings for sensors, lenses for eyeglasses and cameras alike, solutions for displays such as mobile phone screens, and applications in precision optics for lasers or LIDAR (light detection and ranging). And on the light-metal casting side, applications for engine blocks, oil pans, transmission housings, structural components, and typical e-mobility-related components such as battery or electronic controller housings. Varied as these markets may be, there is one driver they share: the demand for improved mobility. Approximately 60% of the AM business stems from the automotive industry, with electro mobility becoming an ever more important growth driver. The business areas not only supply the technologies and systems, but also process expertise, including a global network for testing, training, consultation, and a wide range of services.



**Die Casting**

Bühler Die Casting is the global technology partner for all high-pressure die-casting needs and supports its customers through all phases of their investment.



**Leybold Optics**

Bühler Leybold Optics is the specialist for the development and manufacturing of vacuum-coating by physical vapor deposition equipment.



**Grinding & Dispersing**

Bühler Grinding & Dispersing offers future-oriented wet mixing, grinding, and dispersing technology solutions for a variety of industries.

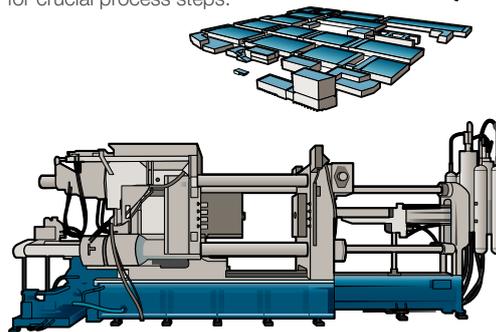
**35%** of the world's car taillights and headlamps are metallized on Bühler machines.



**50%**

of new cars worldwide have die-cast components produced with Bühler technology.

**60** gigafactories will be running worldwide by 2030. Bühler offers solutions for crucial process steps.



**Some 25%** of all die-cast components produced globally are made on Bühler systems.

**Nearly 1,000**

die-casting foundries rely on Bühler day in, day out.

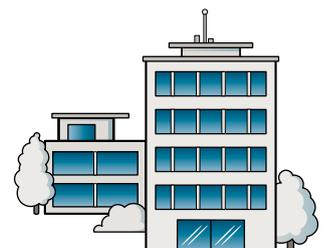
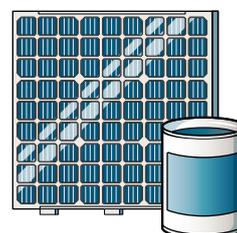


**Over 75%**

of all banknote printing inks are made with Bühler machines.

**75%**

of the silver paste used in solar panels is produced on Bühler equipment.



**50%**

cut in energy is achieved in buildings using architectural glass coated by Leybold Optics glass coaters.

**Aluminum to die-cast parts, pigments to cosmetics:  
Six examples of Bühler Advanced Materials process technologies**

● = where Bühler technologies are involved

