



**High-performance polymers for
innovative replacement of metal and glass**

EMS
EMS-GRIVORY

Our products

EMS-GRIVORY – Your specialist for polyamides

Polyamides are the most versatile and well performing of polymeric materials. Not only is the manufacture of our high performance polymers environmentally friendly, they can also be recycled with minimum impact to the environment. EMS-GRIVORY focuses exclusively on the manufacture of high performance polymers and their continuous development. We offer the broadest range of polyamides worldwide.

Helping customers achieve their goals

Our objective is to produce custom-made solutions. Based on our customers' needs, ideas or problems, we seek to provide the optimal product and process recommendations to meet the required profile. Our research and application engineers develop products and processes which provide the required properties. We can support our customers in tool construction and fabrication as well as in

the testing of prototypes. Thus, we provide the customer with a complete solution rather than just a polymer. The focus of our international team of specialists goes beyond merely selling our polymers. We strive for superior performance in the development of new polymers, in comprehensive technical consulting and services.

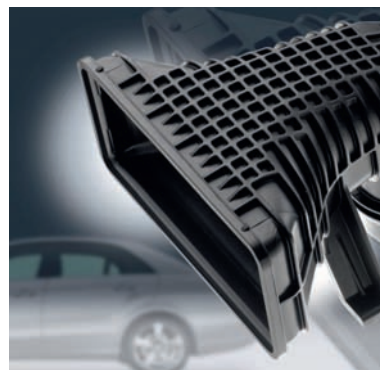
Our range of products...

Our high-performance polymers are recognized worldwide under the trade names Grivory®, Grilamid® and Grilon®. Our products are delivered to our customers in pellets suitable to be processed into the required shape and form using injection and extrusion moulding processes. Applications for our products are found in the fields of automotive manufacture, electro and electronics, telecommunications, industrial and consumer goods, optics, medical and packaging.

Customer applications

The solution for weight and cost saving in automotive construction

In the automotive industry, EMS-GRIVORY has contributed significantly to the development of modern vehicle components of the highest quality. Reduction in component weight, economic fuel consumption, reduced emissions and optimal recyclability are requirements that must be met by our polymeric materials – along with increasingly high standards of comfort and



safety. They replace traditional die-cast alloys as materials for functional parts in vehicle interiors such as arm rests, covers or dashboard components, as well as external components such as door-handles, wing mirrors or windscreen wiper units, and also open up new design possibilities while providing decisive cost and weight-reduction advantages. Our materials are resistant to chemicals, corrosion and weathering and allow efficient design and production of media supply lines for fuel or cooling systems. Components inside the engine compartment are also being increasingly made from polymeric materials. For this purpose, we manufacture high-

Grilamid®
EMS

GRIVORY®
EMS

GRILON®
EMS





performance polyamides with especially high heat resistance. Examples of such applications are air ducts for turbocharged engines, heat exchangers and throttle bodies. Polymers from EMS-GRIVORY are also found in automotive electrical and electronic systems, which must ensure trouble-free operation even under extreme climatic conditions. Furthermore, our polyamides are used in clutch, brake or power steering systems where resistance to motor oils and hydraulic fluids is required. High-performance materials from EMS-GRIVORY fulfil the highest requirements of all modern vehicles.

Polyamides from EMS-GRIVORY are predestined for electrical and electronic applications

As stiff and impact-resistant housings for mobile telephones, our products protect the internal electronic components while satisfying the highest technical and aesthetic requirements. EMS polyamides are preferred materials for frames, houses and display windows. In miniaturised electronic components such as LEDs or connectors, EMS polyamides ensure highest precision and are also resistant to heat and soldering. Miniaturization and faster switching operations place increasingly high demands on mechanical and thermal requirements for electrical supply components. Here also, replacement of metal is a major topic where above all impact strength and dimensional accuracy play an important role.



Metal and glass replacement for industrial and consumer goods

In the sanitary market our products are used in water meters, water filter housings, filter bowls and pressure-reduction valves. The high performance characteristics of our polymers, for example in coffee machines, fulfil the stringent regulatory requirements for direct contact with drinking water and food. Our products also cover a wide range of application requirements in the construction, pneumatic and machine industries.



EMS-GRIVORY – global market leader in eyewear

EMS polyamides enable the perfect combination of functionality, unlimited design possibilities and colour variations in addition to UV protection for sun and sports glasses. This applies to both frames and lenses. Our polyamides are also used to make thin, ultra-light frames for corrective glasses. For safety glasses, our products provide highest levels of safety with absolute transparency.



Well-packaged with polyamides from EMS-GRIVORY

Food and beverages remain fresher for longer when packaged in materials made of polyamides from EMS-GRIVORY, thanks to their special barrier properties against oxygen, carbon dioxide, flavours and aromas. Packaging materials must comply with strict safety regulations demanded by governmental health authorities. Speciality barrier polymers from EMS-GRIVORY are also used in the manufacture of packagings for cosmetics, food and beverages, such as beer and carbonated soft-drinks, as well as for containers for a variety of chemical products.



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EMS-GRIVORY, a Business Unit of
the EMS Group



About us

EMS-GRIVORY is part of the Performance Polymers business area of the EMS Group and employs more than 800 people worldwide.

The largest development and production site is in Domat/Ems, Switzerland with further production sites in Germany, the USA, China and Taiwan. We operate development and sales organisations in all major markets in Europe, Asia and America.

The independent business units EMS-GRIVORY Europe, EMS-GRIVORY Asia and EMS-GRIVORY America have been established to help us in our quest to further accommodate the special requirements of the different market regions. At the same time, customers worldwide benefit from our close global network in application development, marketing and sales as well as research and development.



POLYMERE WERKSTOFFE FEINCHEMIKALIEN/ENGINEERING