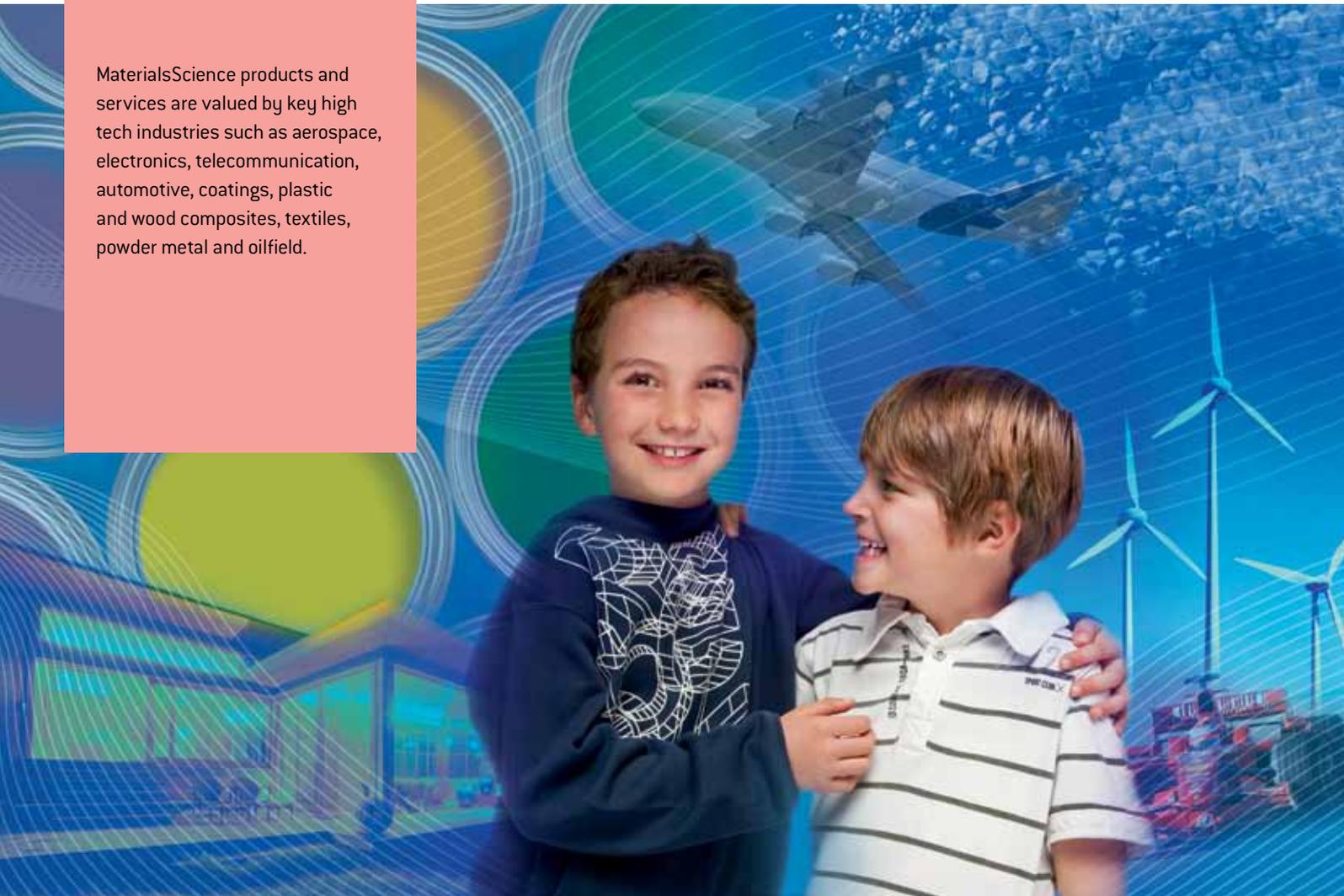


Materials solutions all along the value chain

MaterialsScience products and services are valued by key high tech industries such as aerospace, electronics, telecommunication, automotive, coatings, plastic and wood composites, textiles, powder metal and oilfield.



MaterialsScience is the umbrella for all kinds of Lonza's materials and services, which enable customers to optimize production reliability with high quality raw materials, to enter new applications with innovative materials, to expand their markets by adding higher performance to their products.

All areas of the business, starting from raw materials over high performance materials to materials protection and materials' properties extension operate under high standards for quality control and quality assurance.

Whether satellites safely operate in orbit, aircraft passengers are protected by flame retardant systems, Formula 1 teams rely on our technology or wood constructions are safely protected during service – Lonza MaterialsScience is proud to be part of the solution.



High Performance Materials

The Lonza High Performance Materials business provides essential components to the composites, electronic and coating industry for highly demanding applications such as advanced aerospace composites, high end circuit boards, protective paints and coatings as well as adhesives and sealants.

We are a world leading supplier of cyanate ester thermosetting resins. In addition we supply a range of specialized hardeners, chain extenders and crosslinkers for materials such as polyurethanes, epoxies and acrylics.

Our products provide various benefits such as outstanding high temperature, radiation and chemical resistance. Superior dielectric performance, mechanical and chemical properties are additional key features. Finally an excellent profile of flame/smoke/toxicity properties combined with low heat release characteristics make them the material of choice for many applications such as mass transportation, where safety is a crucial aspect.

Primaset™

Primaset™ resins are a well established group of high temperature resistant, thermosetting polymers with excellent flame retardancy and outstanding dielectric properties. They contribute to the safety and low weight of key components, which are designed to be long-lasting in highly stressed environments. Their superior performance profile makes them the material of choice for highly demanding industries such as aerospace, electronics and transportations.

Lonzacure™

The Lonzacure™ range is a powerful class of high quality and easy to handle polyurethane chain extenders for advanced two component polyurethane cast and spray applications where extremely high thermomechanical, chemical and abrasion resistance are needed. As epoxy hardeners they provide improved use temperatures, moisture absorption and impact resistance. Areas of use are coatings, aerospace, automotive and the general industry.



Lonzamon™

The Lonzamon™ series are Acrylic Acid ester monomers used to upgrade acrylic polymers for coating and adhesive applications. They are especially useful when there is need for improved adhesion, reduced glass temperatures, reduced solution viscosities and enhanced crosslinking functionality. They also promote adhesion to metal, mineral and wood surfaces, and improve the VOC profile in the final application.

Pyromellitic Dianhydride

Pyromellitic Dianhydride (PMDA) is mainly applied as an intermediate for polyimide films as well as polyimide based composite materials in flexible printed circuit boards, tape automated bonding, magnetic wire insulation, and other high performance applications. PMDA based polyimide molding resins are used to produce components for seal rings, thrust washers, special gaskets or thermal and electrical insulators.

« We provide customers with a wide range of solutions that deliver high-performance, cost-effective fulfillment of their material needs. »



Performance Intermediates

Lonza's cracker in Visp, Switzerland is the backbone of a comprehensive, fully backward integrated chemical network. Our diverse product portfolio, consisting of HCN-, diketene derivatives and basic chemicals that are key raw materials and intermediates to many sophisticated applications, arises out of it. Lonza is one of a small number of leading cyanuric chloride and other special HCN derivative manufacturers. These intermediates are used in the synthesis of dyestuffs, optical brighteners, and adhesives, for example. In the production of diketene derivatives, Lonza is one of the world's leader providing a wide range of applications in the industry in pigments and coatings. A selective number of cracker related basic chemicals are offered as well.



Materials Protection

At Lonza, the Materials Protection segment is dedicated to deliver outstanding performance. We are passionate about innovative technology. Our focus to drill in on both current and future industry needs enables us to provide cost effective solutions. We aim to break through the challenges faced by each market segment we serve.

As one of the world's leading suppliers to the life science industries, our products and services span our customer's needs from research to final product offering. Our goal is to constantly search for opportunities to make your product stronger, to advance its protective qualities and push for the optimal performance in processing.

Powdered Metals

Lonza's quality lubricants ensure consistent, high performance in the blending of metal powders for P/M part production. Acrawax™ C has been the benchmark for excellence in the powder metal industry for almost 50 years.

Since Acrawax™ C is 100% metal-free, it is completely combustible and leaves no residue on sintered parts. This clean burning lubricant generates no metallic or corrosive by-products, which can contribute to environmental emissions and furnace corrosion.

Acrawax™ C Atomized

- High green and sintered strength
- High melt point
- Excellent free flowing mix properties
- Promotes easy part removal and reduced distortion



« Solutions which make other materials more durable, more attractive, lighter, safer and more efficient. »

Plastics / Lubricants

At Lonza, our dedication to deliver outstanding performance is what drives us. That is why we are setting the pace for new concepts in plastics with our lubricants, processing aids and mold release agents. These additives allow processors to optimize the performance of their materials to meet demanding needs of the market.

With our expertise in specialty chemicals, we have the capability to develop new polymer additives based on emerging market needs. Our core technologies for process additives include amide waxes, specialty esters, sorbitan esters and kosher esters.

Lubricants

Viscosity and cycle time reduction, shear heat reduction, improved thermal stability

- Acrawax™ C
- Glycolube™ 674
- Glycolube™ 825
- Glycolube™ P-ETS
- Glycolube™ WP 4400

Antistats

Static charge dissipation, compatibility, clarity

- Glycolube™ AFA-1
- Glycolube™ 110
- Glycolube™ 140

Antifogs

Transparent moisture layer, prevention of condensation

- Glycolube™ AFA-1
- Glycolube™ 100
- Glycolube™ 740
- Glycolube™ MO-0-20

Dispersion aids

Uniform dispersion of color concentrates

- Acrawax™ C
- Glycolube™ 674
- Glycolube™ TS

Slip aids

Reduced friction

- Acrawax™ C
- Glycolube™ 674
- Glycolube™ VL



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