English

Construction

THINKING OF TOMORROW

Commitment since 1884

Omya was founded in 1884 in Oftringen, Switzerland, under the name Plüss-Staufer. Gottfried Plüss and his father- in-law Adolf Staufer produced glazing putty by combining fine chalk with linseed oil. From the very start, the forefathers of Omya were committed to supplying the highest quality.

To keep their pledge, they soon acquired a chalk quarry in France and built their own chalk powder mill in Oftringen. These long-standing traditions are still valid today.

A second chalk quarry at Omey, France, led to the Omya brand name at the turn of the 20th century. A strict focus on customer needs quickly let the business expand in Switzerland and beyond.

Continuous innovation, stable ownership and a consistent long-term focus set the scene for the company's international expansion. High quality products and excellent customer relationships have made Omya a highly regarded global brand.

About Omya

Omya is a leading global producer of industrial minerals, mainly mineral additives and pigments derived from Calcium Carbonate and dolomite, and a worldwide distributor of specialty chemicals.

Committed to implementing the principles of sustainability at all company levels, Omya provides value-added products and services from responsibly sourced materials to meet the essential needs of current and future generations.

Omya provides a wealth of product solutions and services that contribute to its customers' competitiveness and productivity in multiple industries:

AGRICULTURE & FORESTRY

CONSTRUCTION

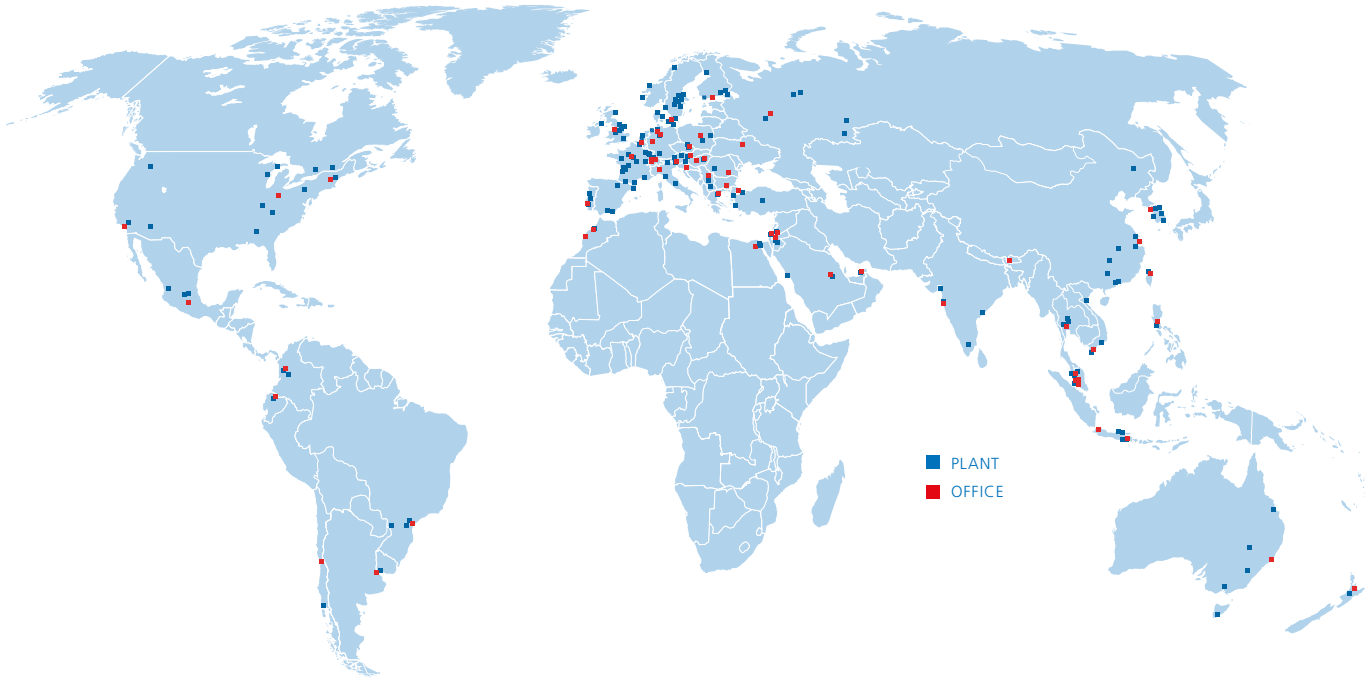
CONSUMER GOODS

PACKAGING

PRINTING & WRITING

TECHNICAL POLYMER APPLICATIONS

WATER & ENERGY



Omya is present around the globe with 8,000 employees at more than 175 locations in over 50 countries.

Thinking of Tomorrow

Omya values long-lasting relationships more than short-term results.
The company's promise »Thinking of Tomorrow« is based on three commitments:

CUSTOMER CARE

Serving our customers is the core value of the Omya brand. We are committed to exceeding our customers' expectations every day. Our teams of sales, technical and regulatory staff have a deep understanding of local markets and requirements.

They provide a uniformly high level of care for our business partners around the world. Our customers can rely on the highest quality of products, delivered to their premises within the agreed time. Whenever needed, they can count on the technical advice from our dedicated team of scientists and engineers; Whether for assistance with implementation, comprehensive lab analysis or reformulation support. Reliability, commitment and quality are the values we trust to establish long-lasting partnerships.

INNOVATION

For Omya, innovation is much more than delivering new products to the market. Being placed at the very start of the value chain, we contribute to our customers' success through a process of co-creation, providing solutions that really work and pay off. Our valuecreation is based on the multi-decade experience of our experts who are used to bring science into practice. Omya's innovations are designed to differentiate our customers' products from their competition and to create new value propositions.

SUSTAINABILITY

Driven by our vision and our strong value-led corporate culture, we take on our role as a partner for a sustainable future, understanding the importance of our actions and our responsibility towards nature and society. At Omya, we take a full life-cycle perspective of our products and services and their contribution to society. Translating our customers' requirements into sustainable solutions with added value, we commit ourselves to sustainable business principles throughout the entire organizational structure – from mining and processing to management. We combine experience with innovation to minimize environmental impact, optimize logistics and ensure a safe and stable work environment for our employees.

Sustainability is the key to future success on our journey of achieving our objectives!

SUSTAINABILITY

Carbon footprint of $CaCO_3$

62 kg of CO_2 equivalents emitted per ton of natural ground Calcium Carbonate [1] produced

[1] Typical grade for plastic applications SOURCE: IMA, EU27 energy mix; based on production capacity mix.

Advanced Minerals & Specialty Chemicals

ADDING CUSTOMIZED VALUE TO CONSTRUCTIONS

We are continuously seeking value-added solutions for customers in our target markets to enhance processes, improve product properties and turn challenges into sustainable business opportunities.

Going beyond products into solutions, Omya combines advanced mineral technology and expertise of more than 130 years with exclusive technical and commercial distribution partnerships. Binders, pigments and additives from leading producers complement our comprehensive portfolio of minerals, to offer our customers unrivalled market advantage.

TAILORED TO OUR CUSTOMERS' NEEDS

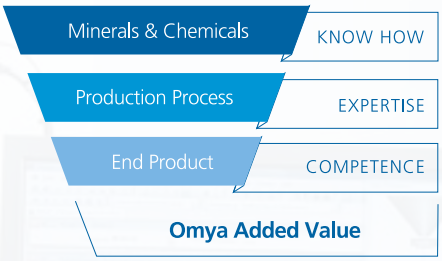
With top quality advice and a wide selection of both mineral and chemical raw materials, Omya meets its customers' exacting demands. We discuss the desired property profile with our customers and suggest suitable combinations of components. Together we find the best possible solution to create value-added products, enhanced by Omya.

enhanced by Omya

PUSHING BOUNDARIES

Our innovations boost established applications and open up new markets

At Omya, we relentlessly push the boundaries of established applications and introduce novel products to open up new markets by investigating new mineral solutions and innovative formulations and technologies. Our expertise enables us to address all aspects of the supply chain from other raw material suppliers to producers of paints, coatings and cement based products.



Functional minerals produced by Omya are instrumental to control key properties of the final product. They help to reduce formulation costs and energy consumption, and they lower the environmental footprint of the end product.

Technical Service

SOUND ADVICE & STATE-OF-THE-ART FACILITIES

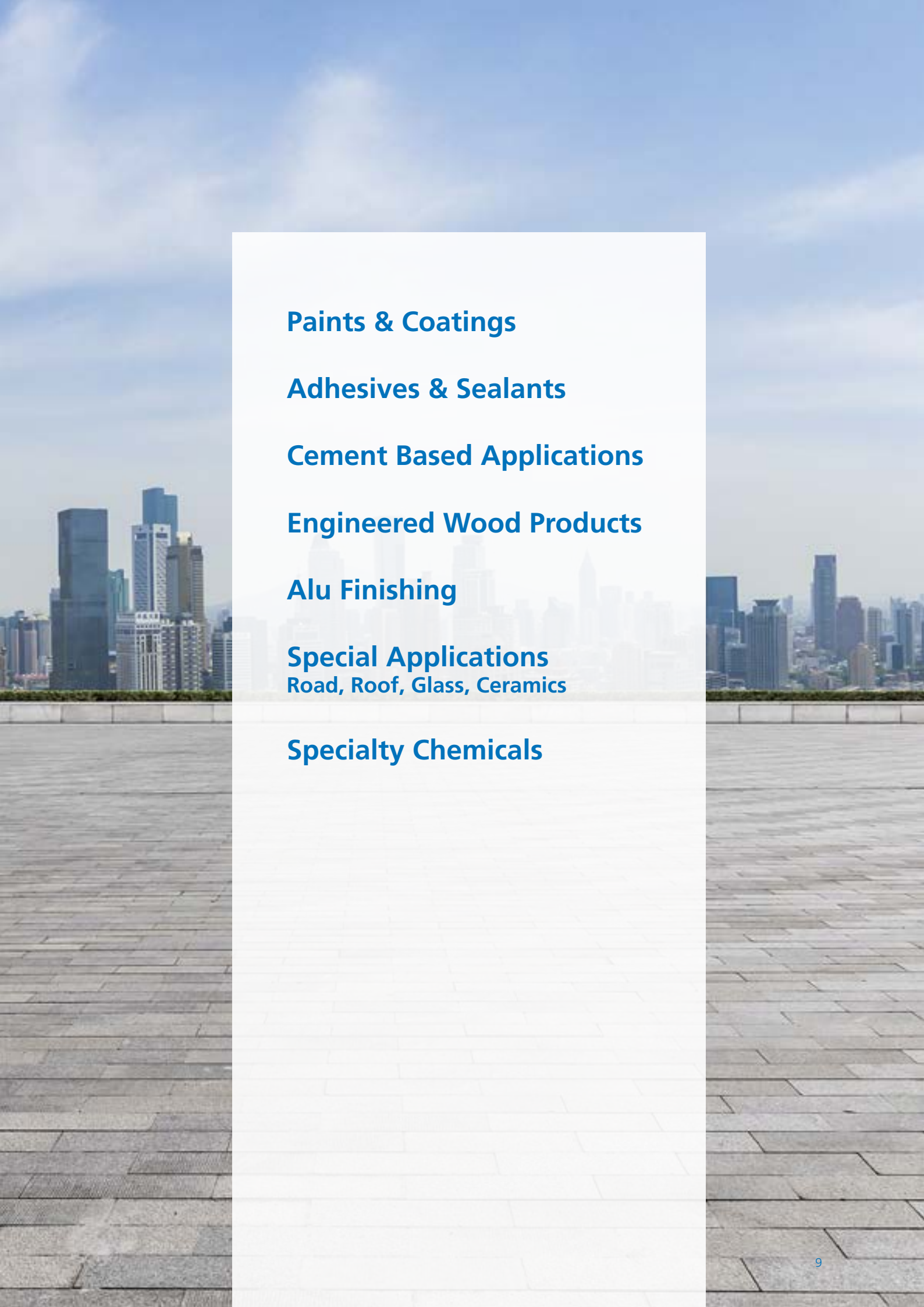
For decades, Omya has cultivated a tradition of focused and dedicated Technical Service. This track record has given Omya the practical experience and skills to help customers continuously add value by improving their formulations and final products' properties. Our customers often consult Omya for advice on complex issues, knowing that with our support they will find and rapidly implement sound technical solutions regarding formulation and processing.

State-of-the-art service labs, including analytics, microscopy and microbiology, quality control and regulatory affairs management provide additional support in problem identification and trouble shooting. The lab methods include electron microscopy with elemental analysis, optical and near-field laser microscopy, spectroscopy, trace element analysis, chromatographic characterization as well as crystallographic analysis.

CUSTOMER CARE

We provide tailored reformulations and on-site technical advice to our customers around the globe as well as technical training tailored to the requirements of their employees.

In our technical service laboratories in Europe, America and Asia, we are ready to take the challenge and demonstrate the performance of our functional fillers in customer-specific formulations.



Paints & Coatings

Adhesives & Sealants

Cement Based Applications

Engineered Wood Products

Alu Finishing

Special Applications
Road, Roof, Glass, Ceramics

Specialty Chemicals

Decorative Paints

enhanced by Omya

Calcium Carbonate has established itself as the main extender in Paints and Coatings. However, due to their ability to enhance paint performance, Omya Calcium Carbonates are in fact functional fillers rather than mere extenders. Selecting the right filler significantly influences key paint properties, such as opacity, sheen and wet-scrub resistance.

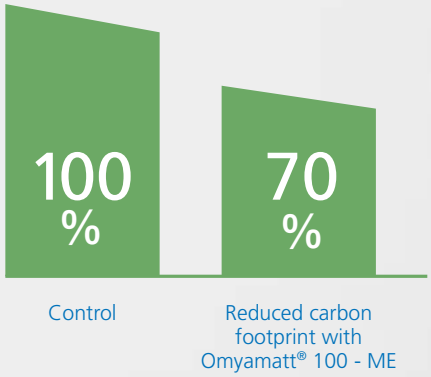
Omya offers an extensive range of standard and specialty Calcium Carbonates with different particle sizes and optical values that improve the properties of the end product. Moreover, our product portfolio of Ultrafine Ground Calcium Carbonate, Precipitated Calcium Carbonate and Modified Calcium Carbonate reduces the need of Titanium Dioxide in decorative coatings. Omya complements its portfolio with other functional minerals and specialty chemicals to provide a complete package to its customers.

INNOVATION

Omyasmart® Zero – Improves the stabilization of water-based applications

Omyasmart® is the brand name embodying new technologies developed for various applications which can help to reduce the impact of certain chemicals on human health and to nature. The Omyasmart® technology can support the reduction of biocides in various products such as Paints, Coatings, Adhesives & Sealants.

Omyamatt® 100 - ME has a 30% lower carbon footprint (CF) than flux-calcined diatomaceous earth and 36% lower CF than crushed expanded perlite.



Benefits

- *High brightness*
- *Better opacity & gloss control*
- *Improved scrub resistance*
- *Excellent cost-performance ratio*
- *Lower CO_2 emission*

INNOVATION

Omyamatt® 100

The latest generation of Modified Calcium Carbonate (MCC) provides highly effective matting properties. The highly optimized design of particle shape and surface structure as well as the controlled particle size distribution and large specific surface area make Omyamatt® 100 a powerful tool and efficient alternative to conventional matting agents. The unique "Golfball" shaped particle is made of a Calcium Carbonate core from natural, high purity and consistent quality source and a Hydroxyapatite shell providing the functional outer structure.

Boosting Opacity

Omya has developed a solution for boosting opacity called **ChameleoBoost™**. Various products based on UFGCC, PCC and MCC improve the opacity performance of titanium dioxide pigments or maintain the opacity level of the coating films allowing the partial substitution of titanium dioxide.

The benefits of ChameleoBoost™ are:

- *Opacity boosting*
- *High brightness*
- *Enhanced TiO_2 performance through spacing effect & pigment stabilization*
- *Formulation cost optimization (e.g. partial substitution of TiO_2)*
- *Gloss control*
- *Reduced carbon footprint of coating formulation*

ChameleoBoost™ Technology

Boosting Opacity

Have you transformed your formulation yet?

Plasters & Renders

Renders need to serve both decorative and functional purposes. To meet the aesthetic demands of customers, textured renders require mineral particles with a mean diameter of up to 7 mm and high brightness. In order to protect buildings from damage, the render must act as a water barrier but allow water to evaporate at the same time.

Primers & joint compounds can be used on their own or to prepare the wall surface for subsequent treatment with plasters and renders. Operators require these materials to be crack-resistant and have good sanding properties to help them work with rough surfaces. Successful formulations achieve these demanding requirements by carefully balancing fine and coarse mineral particles.

Omya Calcium Carbonates and other minerals are ideal for formulations that meet these specific requirements. The nodular particle shape offers good workability and enhances applicability. It also improves the hardness and mechanical properties of the applied Plasters & Renders.

Benefits

Plasters & Renders

- *Improved filler packaging for higher filler loadings*
- *Designing textures*
- *Avoidance of pinholes & cracks for better aesthetics*
- *High brightness*
- *Lower CO_2 emission*

Primers & Joint Compounds

- *Increased filler level*
- *Smooth surface*
- *Good sanding properties*
- *Weight reduction*
- *Increase volume solids*
- *Spreading rate per weight*
- *Lower CO_2 emission*

INNOVATION

Omyapearl®

New advanced technology at different positions in the production of Omyapearl® contributes to brilliant white granules with virtually no color impurities. Omyapearl® products ensure high brightness and facade texturing with a very good quality consistency for decorative render and plaster applications. This premium quality allows the reduction of TiO_2 pigments in formulations to an absolute minimum while ensuring a constant white appearance.

Omya is a key supplier for the render and plaster industry, being one of the most important components for external thermal insulation composite systems (ETICS).

INNOVATION

Omyasphere® – Lightweight Fillers (LWF)

The demand for lightweight fillers is rapidly growing in many applications around the world. Our answer to this trend are lightweight fillers based on different expanded minerals. The Omyasphere® portfolio provides very low apparent density combined with high brightness. Means, less weight needs to be carried of the functional mineral filler as well when used in its final applications supporting workers life and health and reduces emissions during transportation.

INNOVATION

Minbar®

White barytes are used as a white extender leading to higher density and improved chemical resistance of industrial coating systems. Powder coatings will also benefit from the use of Minbar® white barytes in terms of optical properties and durability.

Industrial & Powder Coatings

Industrial coatings primarily serve as protection. Hence, they use much less pigments and fillers than emulsion paints. Selecting the appropriate filler and optimizing formulations are still of great importance because of their impact on the coatings' gloss, viscosity, durability and production cost. Besides other minerals like Baryte, Omya Calcium Carbonates have become a preferred component in top coats requiring high gloss and gloss retention. Similarly, Omya Calcium Carbonates are the first choice to adjust the gloss level in powder coatings. In addition, Omya products enjoy wide application in primers. Our portfolio is complemented with other functional minerals and specialty chemicals to provide a complete package to our customers.

Benefits

- *Gloss control*
- *Cost optimization*
- *VOC reduction*
- *Lower CO_2 emission*

Printing Inks

There is a wide variety of printing inks. Some of them are based on water, solvents or oil, and their viscosity levels spread from very low up to a pasty consistency or even solid content. As a result, they need a filler that is as versatile as their formulation range. Omya Calcium Carbonates control the rheology and adjust the lipophilic-hydrophilic balance of oil-based offset inks.

Benefits

- *Control the rheology*
- *Reduce costs*
- *Adjust the lipophilic-hydrophilic balance*

Adhesives & Sealants

Coated and uncoated, Ground and Ultrafine Precipitated Omya Calcium Carbonates are basic raw materials in many Adhesives & Sealants. In the past, they used to replace binders for cost reduction. Today, formulations apply Omya Calcium Carbonates for their specific functional performance. Omya products are capable of modifying rheology, improving bond strength, or reducing water demand. Typical applications of Adhesives & Sealants enhanced by Omya are in construction, transportation, packaging, tapes, and numerous industrial applications.

Benefits

- *Easy to disperse*
- *Good workability*
- *Reduced binder demand*
- *Improved rheology*
- *Enhanced strength & elasticity*
- *Reduced moisture pick-up*
- *Economical filler*
- *Lower CO_2 emission*

INNOVATION

Omyabond®
Hakuenka®

Because of modern production process control of particle size and particle morphology in combination with specific surface treatment new functional fillers have been developed for the Adhesives & Sealants industry. Excellent mechanical performance and rheology control for better workability is provided by the Hakuenka® Ultrafine Precipitated Calcium Carbonates (UFPCC) with optimized surface treatments. For one component moisture reactive sealants long shelf life and fast curing speed are key characteristics beside the mechanical performance. Smart fillers of the Omyabond® family based on Ultrafine Ground Calcium Carbonates (UFGCC) unite the described requirements as a result of their very little moisture content.

Cement Based Applications

Our contribution to concrete & dry mortar development

For centuries, builders knew about the advantageous properties of Calcium Carbonate for Cement Based Applications, such as concrete. Today, Omya Calcium Carbonate fines (CCFs) in the form of various Betocarb® grades and Betoflow® are the preferred mineral plasticizers for concrete products such as paving stones, tubes and sewage tanks, as well as in ready-mixed and pre-cast concrete. Omya has a long and successful track record in the concrete and construction segment, making its range of Betocarb® and Betoflow® products a name from North & South America and Europe.

Omya Calcium Carbonates provide clear value propositions for various applications in the field of cement based systems. Focusing on the required characteristics of the final product, Omya adds value through its range of functional minerals. For instance, in technically complex systems such as high performance concretes, our mineral plasticizers provide strong benefits like an improved water-cement ratio and therefore an optimization of the admixture efficiency. On the bottom line, Omya products make a concrete composition more economical and ecological.

INNOVATION

Betocarb® HP, Betocarb® UF, Betoflow® D

When Betocarb® and Betoflow® is formulatd in the grout, mortars and concrete, it increases the flowability and workability, improves particle packing and reduction of shrinkage, better esthetics and significant reduction of microporosity, higher casting for dry and plastic concrete.

Omya’s Mineral Plasticizer®

INNOVATION

Achieving a homogenous pigment distribution

Cement Based Applications contain hundreds of thousands of tons of iron oxides, which impair their color stability and pigments distribution. Mineral plasticizers from Omya solve this problem, as demonstrated by the new LGpigment® method. LGpigment evaluates the color efficiency and the consistency impact of an increasing amount of pigment in a cement based product. The method shows that a combination of Betocarb® and Betoflow® grades allows the pigment concentration in the concrete to be increased from 3 to 30% of the binder volume. In addition, the pigment distribution in the cement matrix is perfectly homogenous and the bright color on the surface makes great aesthetics.

INNOVATION

Omyawood® – Calcium Carbonate for fiber board

Adding Omyawood® to wood-based panel products allows to increase your raw material efficiency. Significant cost saving results can be achieved on existing production lines with minimal process or equipment changes while maintaining key mechanical properties.

Omyawood® can help reduce total manufacturing cost in wood panel products as a cost competitive, readily available, consistent and easily applied raw material.

Engineered Wood Products

New application development activities of Omya have reached out into the wood based panel industry. Using Calcium Carbonate as fiber replacement in fiberboards or providing a Calcium Carbonate based – and in-line realized – innovative surface treatment of wood based panels, is well perceived and highly appreciated in the industry.

Benefits

- *Significant cost saving potentials*
- *Full technical support based on experience*
- *Providing solutions for individual differentiation strategies*

Alu Finishing

Aluminum is the earth crust's most common metal and third most abundant element. Its lightweight, classy looks and other useful features make it ever more popular. In the Swiss distribution business of Omya, the Aluminum Finishing team distributes dyes and process chemicals for the coloring of anodized aluminum. Omya is the exclusive distributor for the following regions: Europe, North Africa and the Middle East. The products are made in Switzerland by Clariant and offer excellent and consistent quality.

Competencies

- *Prompt technical support after the sale through an expert team of Application Technicians*
- *Trouble shooting, color matching and process optimization*
- *Customized, tailor made workshops and trainings*
- *Product development*

INNOVATION

Omexal® Coats – decorative corrosion protection for anodized aluminum

Omexal® Coats are inorganic coatings, produced by sol-gel process, for anodized aluminum. Key product of the portfolio is Omexal® Clear Coat. The preferred application for Omexal® Clear Coat is on high gloss aluminum, because of its vitreous structure and excellent anti-corrosion function. Omexal® Clear Coat can be modified in color and function when combined with Omexal® 4CC pigmentations. For example, Omexal® Steel Grey Matt Coat was developed to provide an appealing stainless steel optics. These surfaces impress by their optics and haptics besides outstanding light resistance and durability.

Special Applications

Road & Roof

Omya Calcium Carbonates have all the product properties required by manufacturers of civil engineering applications. Omya products help achieve sufficient stiffness and resistance of deformation to cope with the paplied pressure from vehicle wheels. They offer adequate flexural strength to resist cracking and good workability combined with optimum durability and a low carbon footprint.

When it comes to roof sheeting for waterproofing, Omya Calcium Carbonates improve the sheet's flexibility, reduce shrinkage and avoid conglutination.

Benefits

- *Optimal flexural strength*
- *High cracking resistance*
- *Low carbon footprint*
- *Reduced shrinkage*
- *No conglutination*

Glass & Ceramics

In glass applications, Omya Calcium Carbonates serve as stabilizers, which modify viscosity and increase durability. For all types of glass, the common properties required of Calcium Carbonate are an extremly low iron content, consistent chemical characteristics and a low moisture content. Omya dolomite, a magnesium Calcium Carbonate mineral, also serves as a stabilizer while in addition improving the glass' resistance to natural or chemical attack in all types of glass.

An economical source of Calcium Oxide

The ceramic market contains two major segments – creamic glass bodies and porous ceramic tiles. Besides silica sand, Calcium Carbonate is a key component in the production of ceramics. Omya Calcium Carbonates are an economical source of Calcium Oxide, which serves as a melting agent at high temperatures (1,050 °C). Moreover, they improve the mechanical and chemical strength of the glass body and reduce shrinkage from firing.

Benefits

- *Reduced shrinkage from firing*
- *Optimized rheology*
- *Improved mechanical & chemical strength*
- *Melting agent*

Omya is strongly committed to providing solutions for our customers based on their specific needs and applications. For decades, we have been developing and expanding our technical expertise in all business sectors based on technical customer intimacy. For this reason, more than 100 Scientists, Engineers and Technicians provide, initiate and deliver high-level technical services and innovations, develop new products, improve established ones, and also constantly support our customers with their help and advice.

With technical facilities and experts located in our headquarters in Oftringen, we are able to provide technical support on a global and local scale. This is due to our dedicated local technical service hubs in the Americas and Asia, who implement best practices according to local needs.

Our strength

Valuable synergistic effects

Thanks to our global distribution network, Omya is a one-stop shop for minerals and complementary products.

Partnership for growth

Omya closely cooperates with leading chemical brands to introduce their latest product developments.

Reliable partners

Our principals entrust their representation and distribution activities to us. This is the best recognition we can achieve.

Specialty Chemicals

Omya offers solutions for applications such as Paints & Coatings, Adhesives & Sealants and Cement Based Applications.

The product categories we serve are:

- *Additives*
- *Binders / Resins*
- *Lightweight Fillers*
- *Mineral Fillers*
- *Pigments & Dyes*

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THINKING OF TOMORROW

THIS PAPER CONTAINS OMYA PIGMENTS