ALUMINOSILICATE
Alumino silicate products are highly siliceous volcanic glass, containing from 9 to 11% of silicon dioxide. They are formed by the unique mineralogical characteristics.

DIATOMACEOUS EARTH
Diatomite is available as plate out effects and improve extrusion characteristics.

700°C, the dehydroxylation of the kaolin is complete vaporisation of the water and the simultaneous softening of the glass, causes the alumino silicate to forming a partially crystalline metakaolin. Fully calcined particles. The control of this expansion and milling technology results in engineered products suitable for industry. In rubber these can be used to reduce coupling with the polymer. Filler dispersion is also improved. due to the reduced surface activity, calcined kaolins can be a cost effective replacement for more expensive components.

SYNTHETIC SILICATES
IMERYS manufactures a line of synthetic silicates, produced by the hydrothermal reaction of diatomaceous earth. Commerce and trade wise are the most exacting demands in industry. Available in a wide range of grades and compositions, our synthetic silicates provide exceptional resistance to scorching and heat, high tensile strength, abrasion and tear strength.

DIATOMACEOUS EARTH
IMERYS is the world leading supplier of diatomaceous earth with extensive worldwide resources. Diatomite is available as a carrier, conditioners, anti-caking agents etc.

Please consult our Technical Manager for further product information and advice.

QUALITY ORE RESERVES
IMERYS has detailed knowledge of the specific properties of each, mined and the applications that provide most value. The mining, and conversion tools used is purely to identify and adapt them to precise industrial applications are adjusted for optimum functionality for a given end use and grade.

PRECISION PROCESSING
Its state-of-the-art plants could are engineered to carefully controlled applications such as peroxide, specific surface area, colour and jet. The unique nature of our deposits and processes gives precise functional properties which selected for specific applications.

QUALITY CONTROL
IMERYS has developed a sophisticated method of analysing with the quality of the minerals based upon standard and customised tests. Our quality management systems are ISO 9001 certified. This ensures that we can improve their effectiveness to enhance customer satisfaction and to remain the leader in quality in our industry.

ADDENING VALUE THROUGH MINERALS

QUALITY RESERVES AND PRECISION PROCESSING

IMERYS is the world's leading supplier of diatomite, with extensive worldwide resources. Diatomite is available as a carrier, conditioners, anti-caking agents etc.

Please consult our Technical Manager for further product information and advice.
A WORLDWIDE INDUSTRIAL GROUP

IMERYS is the world’s largest producer of white industrial minerals, with a network of plants across six continents including major sites in the UK, Belgium, France, Italy, Spain, USA, Brazil, Australia, Japan and China.

IMERYS supplies minerals to a wide range of industries, including polymers, refractories, paper and coatings, specialized divisions serve each industry so that our customers always deal with people who understand their business. This is supported by an absolute commitment to quality to ensure the consistency and reliability of our products and services.

IMERYS is a major supplier of calcined kaolins, white treated calcined kaolins, hard and soft kaolins, diatomaceous earth, synthetic calcium silicate and mica to the European and Global rubber industries. Strong technical understanding of our products and their applications in rubber complements the natural value of the minerals we supply.

IMERYS‘ commitment to our customers in the rubber industry.

Our industry-focused team is dedicated to providing innovative commercial and technical solutions for our customers.

Our technical personnel have an established track record in the development of products for the rubber industry and an in-depth understanding of our products and their applications in rubber.

Our European product and application development laboratories in the UK are well equipped and staffed to meet the technical requests of our customers.

In addition to the full range of analytical equipment, IMERYS laboratories contain the following rubber processing equipment: a single screw extruder, two twin screw extruders, an injection moulder, a Banbury internal mixer, a bridge twin roll mill and a pulping and hydraulic press.

IMERYS‘ products and services.

Kaolins, hard and soft kaolins, diatomite, synthetic calcium silicate and polymers, rubber, paint, paper and ceramics. Specialist divisions serve our customers in the rubber industry with a proven history of close technical collaboration with compounders and processors that has led to an in-depth understanding of the mineral requirements of the rubber industry.

Backed by an extensive product and application development network of plants across six continents including major sites in the UK, Belgium, France, Italy, Spain, USA, Brazil, Australia, Japan and China.

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 processes. IMERYS laboratories control the following rubber processing parameters to ensure consistent results: melt index, torque, single screw extruder, twin screw extruders, injection moulder, Banbury internal mixer, twin roll mill and pulping.

IMERYS‘ commitment to quality to ensure the consistency and reliability of our products and services.

IMERYS‘ products are white this enables them to be used in pigmented and non black systems and can give complementary options to carbon black and synthetic silicas.

The morphology of certain products helps in the extrusion process of the final product, often improving the surface appearance and reducing defects such as shark skin.

EXCELLENT EXTRUSION

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The morphology of certain products helps in the extrusion process of the final product, often improving the surface appearance and reducing defects such as shark skin.
IMERYS is the world’s largest producer of white industrial minerals, with a network of plants across six continents including major sites in the UK, Belgium, France, Italy, Spain, USA, Brazil, Australia, Japan, and China.

IMERYS’ understanding of minerals for rubber applications.

imerys supplies minerals to a wide range of industries, including polymers, rubber, paint, paper and concrete, specialist divisions serve each industry, so that our customers always deal with people who understand their business. This is supported by an absolute commitment to quality to ensure the consistency and reliability of our products and services.

imerys is a major supplier of calcined kaolins, silane treated calcined kaolins, hard and soft kaolins, diatomite, synthetic calcium silicate and mica to the European and Global rubber industries. Strong technical understanding of our products and their applications in rubber complements the natural value of the minerals we supply.

imerys’ investment in product and application development is a clear commitment to our customers in the rubber industry.

imerys has a proven history of close technical collaboration with producers, companies and processors that has led to an in-depth understanding of the mineral requirements of the rubber industry.

- Our industry-focused team is dedicated to providing innovative commercial and technical solutions for our customers.

- Our technical personnel have an established track record in the development of products for the rubber industry and an in-depth understanding of minerals for rubber applications.

- Our European product and application development laboratories in the UK are well equipped and staffed to meet the technical requests of our customers.

- In addition to a full range of analytical equipment, imerys laboratories contain the following rubber processing equipment: a single screw extruder, two bead screw extruders, an oscillating moulder, a Banbury internal mixer, a bridge twin roll mill and a j.r. dare hydraulic press.

imerys’ additives can be used in a whole range of applications in performance rubber products to improve physical properties, processing and cost of the final product.

backed by an extensive product and application development laboratory we are able to provide guidance on how best to compound our materials into final products.

a diverse mineral portfolio enables a whole range of benefits to be delivered to the final product to ensure the most cost-effective formulation to be delivered.

superior reinforcement

many products will provide reinforcement benefits due to combinations of particle size and structure. as many of the minerals we supply are white this enables them to be used in a whole range of applications and can give complementary options to carbon black and synthetic silicas.

excellent extrusion

the morphology of various products helps in the extrusion performance of the final product, often improving the surface appearance and reducing defects such as shark skin.

compression set

the use of specific treated products and also principally inert materials can give improved compression set over other rubber additives. this will enable manufacturers to produce a product in their final application for longer, increasing service life.

improved mechanical properties

the use of certain products with superior dielectric performance and optional surface treatment can lead to excellent electrical insulation, especially in high voltage applications.

other advantages

many specific performance advantages can be achieved through the use of our minerals: for example, sound damping, barrier effects and use as carriers to deliver liquid-phase additives.

certain products are available for use in pharmaceutical and food contact applications.

imerys products for rubber

rubber used in high-tech tyres

rubber used in medical equipment

rubber compounds
A WORLDWIDE INDUSTRIAL GROUP

IMERYS IS THE WORLD’S LARGEST PRODUCER OF WHITE INDUSTRIAL MINERALS, WITH A NETWORK OF PLANTS ACROSS SIX CONTINENTS INCLUDING MAJOR SITES IN THE UK, BELGIUM, FRANCE, ITALY, SPAIN, USA, BRAZIL, AUSTRALIA, JAPAN AND CHINA.

IMERYS supplies minerals to a wide range of industries, including polymers, rubber, paint, paper and ceramics. Specialist divisions serve each industry, so that our customers always deal with people who understand their business. This is supported by an absolute commitment to quality to ensure the consistency and reliability of our products and services.

IMERYS is a major supplier of calcined kaolins, silane treated calcined kaolins, hard and soft kaolins, diatomite, synthetic calcium silicate and many other products to the rubber industry, so that our customers always deal with people who understand their business. This is supported by an absolute commitment to quality to ensure the consistency and reliability of our products and services.

IMERYS has a proven history of close technical collaboration with producers, compounders and processors that has led to an in-depth understanding of our products and their applications in rubber and other industries.

Our industry-focused team is dedicated to providing innovative commercial and technical solutions for our customers.

Our technical personnel have established track records in a wide range of industries and are available to advise and assist our customers. Our European product and application development laboratories in the UK are well equipped and staffed to meet the technical requests of our customers.

In addition to a full range of analytical equipment, IMERYS laboratories contain the following ultrafine particle size analysers:

- Single particulate, two laser, single channel, optical mollecular, a laboratory internal mixer, a bridge twin roll mill and a 12.5 mm hydraulic press.

IMERYS’ additives can be used in a whole range of applications to improve performance and properties, processing and cost of the final product.

Rubber is an essential industry for the production of various goods, including medical equipment. IMERYS’ additives can be used to improve performance and properties, processing and cost of the final product.

COMPRESSION SET

The use of specific treated products and also principally inert materials can give improved compression set on other rubber additives. This will enable rubber producers to provide performance in their final application for longer, increasing service life.

IMPROVED MECHANICAL PROPERTIES

Many products will provide reinforcement benefits due to the orientation of particle size and structure. As many of the minerals we supply are white this enables them to be used in pigmented and non-black systems and can give complimentary options to carbon blacks and synthetic rubbers.

EXCELLENT EXTRUSION

The morphology of various products helps in the extrusion performance of the final product, often improving the surface appearance and reducing defects such as chalky skin.

IMPROVED ELECTRICAL PROPERTIES

The use of certain products with superior dielectric performance and optional surface treatment can lead to excellent electrical insulation, especially in high voltage applications.

OTHER ADVANTAGES

Many specific performance advantages can be achieved through the use of our minerals. For example, sound damping, barrier effects and for use as carriers to deliver liquid process additives. Certain products are available for use in pharmaceutical and food contact applications.

### HIGH QUALITY MINERAL ADDITIVES

IMERYS’ additives can be used in a whole range of applications to improve performance rubber products to improve physical properties, processing and cost of the final product.

Rubber is an essential industry for the production of various goods, including medical equipment. IMERYS’ additives can be used to improve performance and properties, processing and cost of the final product.

### TYPICAL PROPERTIES

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ALUMINO SILICATE
Alumino silicate products are highly siliceous volcanic glass, consisting from 5 to 21 percent cold water. When rapidly heated to the proper temperature, the dehydration of the water and the simultaneous vaporisation of the water and the simultaneous softening of the glass, causes the alumino silicate to suddenly expand, or “pop” into lightweight cellular products with an amorphous structure are formed above the particles. The control of this expansion and milling technology results in engineered products suitable for specific applications. When calcination occurs at around 980°C, the dehydroxylation of the kaolin is complete and results in improved porosity, improved reinforcement, and the production of a denser product. Fully calcined kaolin can be treated with functionalised silane to give a particle surface capable of chemically coupling with the polymer. Filler dispersion is also improved. Due to the reduced surface activity, calcined kaolins can be a cost effective replacement for more expensive components.

DIATOMACEOUS EARTH
IMERYS is the world leading supplier of diatomace with extensive worldwide experience. Diatomite is available as ground or calcined products for a wide use of diatomite as a functional additive is its unique combination of physical properties, including high porosity, thermal and chemical stability, unique particle structure/high surface area, low specific gravity, low interaction with other additives and whiteness.

CALCINED KAOLIN
Calcined kaolin is an anhydrous aluminium silicate produced by heating natural clay shale to high temperatures in a kiln. This calcination process give an increase in hardness and changes the morphology of the kaolin particles. When calcination occurs at around 700°C, the dehydroxylation of the kaolin is complete and results in improved compressive strength, improved reinforcement, and the production of denser products. When calcination occurs at around 980°C, the dehydroxylation of the kaolin is complete and results in improved porosity, improved reinforcement, and the production of a denser product.

HYDROUS KAOLIN
Kaolin is a finely divided aluminium silicate crystalline mineral formed over many millions of years by the hydrothermal decomposition of granite rocks. Kaolin is characterised by low particle size, platy or layered particle shape and chemical inertness. This combination of properties and results in improved processability, improved reinforcement and improved performance. Hydroxy kaolins can be a cost effective replacement for more expensive components.

SYNTHETIC SILICATES
IMERYS manufactures a line of synthetic silicates, produced by the hydrothermal reaction of diatomite, hydronium and cold water. Through control and deliberate control of the processing conditions, the chemical and physical properties of the final product can be tailored to the most exacting demands in industry.

KEY APPLICATIONS & BENEFITS

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<th>BENEFIT</th>
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<th>TREATED KAOLIN</th>
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IMERYS
Par Moor Centre - Par Moor Road - Par - Cornwall - PL24 2SQ - England
Tel: +44 (0) 1726 818000 | www.imerys-perfmins.com

PRECISION PROCESSING
IMErys has detailed knowledge of the specific properties of both mineral and the applications that provide most value. The setting and conversion tests used to purely minerals and adapt them to precise industrial applications are adjusted for optimum functionality for a given mineral and grade.

QUALITY RESERVES AND PRECISION PROCESSING
IMErys has detailed knowledge of the specific properties of both mineral and the applications that provide most value. The setting and conversion tests used to purely minerals and adapt them to precise industrial applications are adjusted for optimum functionality for a given mineral and grade.

IMERYS is the world's leading supplier of diatomite, with extensive worldwide reserves. DIATOMITE is available as ground or calcined products for a wide use of diatomite as a functional additive is its unique combination of physical properties, including high porosity, thermal and chemical stability, unique particle structure/high surface area, low specific gravity, low interaction with other additives and whiteness. The structure of this material allows it to offer a level of reinforcement and other functional properties such as improved compression set etc.

RUBBER
Our experienced scientists and engineers work closely with all customers’ plant and production managers in a wide range of industries. We offer problem solving advice for increasing productivity or improving product quality utilising existing grades, innovative solutions or customised new product developments. Our application development laboratories conduct basic and applied research, product development, process improvement and pilot plant operations.

ADDING VALUE THROUGH MINERALS

ADDING VALUE THROUGH RESEARCH
Our experienced scientists and engineers work closely with all customers’ plant and production managers in a wide range of industries. We offer problem solving advice for increasing productivity or improving product quality utilising existing grades, innovative solutions or customised new product developments. Our application development laboratories conduct basic and applied research, product development, process improvement and pilot plant operations.

IMERYS PERFORMANCE MINERALS GROUP
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ALUMINO SILICATE
Alumino silicate products are highly siliceous volcanic glasses, consisting from 5 to 25 percent combined water. When rapidly heated to the proper temperature, the vaporisation of the water and the instantaneous softening of the glass, causes the alumino silicate to suddenly expand, or “pop” into lightweight cellular particles. The control of the expansion and melting technology results in engineered products suitable for specific industrial applications. In these high-tech applications, the structure of this material allows it to offer a level of reinforcement and other functional properties, such as improved compression set etc.

HYDROS KAOLIN
Kaolin is a hydrous aluminium silicate crystaline mineral formed over many millions of years by the hydrothermal decomposition of granite rocks. Kaolin is characterized by fine particle size, platy or tabular plate shape and chemical purity. This combination of major and minor components results in improved processability, improved reinforcement, and other properties. The unique mineralogical composition and structure of kaolin can be a cost effective replacement for expensive composite components.

SYNTHETIC SILICATES
IMERYS manufactures a line of synthetic silicates, produced by the hydrothermal reaction of diatomite, kaolin, and hydrated lime and water. Through careful and deliberate control of the processing conditions, the chemical and mechanical characteristics of kaolin can be modified to meet the exacting demands in industry. Available in a wide range of grades and compositions, our synthetic silicates provide exceptional performance as process aids, fillers, reinforcing agents and specialty carriers, anti-caking agents etc.

ADISSION THROUGH MINERALS
Kaolin is a hydrated aluminium silicate crystalline mineral formed over many millions of years by the hydrothermal decomposition of granite rocks. Kaolin is characterized by fine particle size, platy or tabular plate shape and chemical purity. This combination of major and minor components results in improved processability, improved reinforcement, and other properties. The unique mineralogical composition and structure of kaolin can be a cost effective replacement for expensive composite components.

DIATOMACEOUS EARTH
IMERYS is the world leading supplier of diatomaceous earth materials. Diatomite is versatile and available in a wide range of compositions with unique combination of physical properties, including high porosity, thermal and chemical stability, unique particle structure/high surface area, law specific gravity, low interaction with other additives and whiteness. The structure of this material allows it to offer a level of reinforcement and other functional properties, such as improved compression set etc.

IMERYS has detailed knowledge of the specific properties of each mineral and the applications that provide most value. The filtering and conversion tools used to purify minerals and adapt them to practical industrial applications are adjusted for optimum functionality for a given end use and grade.

QUALITY RESERVES AND PRECISION PROCESSING
IMERYS has detailed knowledge of the specific properties of each mineral and the applications that provide most value. The filtering and conversion tools used to purify minerals and adapt them to practical industrial applications are adjusted for optimum functionality for a given end use and grade.

QUALITY ORE RESERVES
IMERYS has detailed knowledge of the specific properties of each mineral and the applications that provide most value. The filtering and conversion tools used to purify minerals and adapt them to practical industrial applications are adjusted for optimum functionality for a given end use and grade.

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