

ADDING VALUE THROUGH MINERALS

CALCIUM CARBONATE

Calcium carbonates are composed of the crystalline mineral, calcite, which occurs naturally in the form of marble, chalk or limestone.

Calcium carbonates are widely used in a variety of coatings where they can provide a variety of effects from simple coating extension to engineered functionality.

Benefits in coatings include:

- ▶ High whiteness
- ▶ TiO₂ spacing
- ▶ Gloss control

DIATOMITE

IMERYS is the world's leading supplier of Diatomite with extensive worldwide reserves. Diatomite is available as natural, calcined or flux calcined products. The key to the wide use of diatomite as a functional additive is its unique combination of physical properties such as particle shape, lightness, hardness & porosity.

Benefits in coatings include:

- ▶ High matting performances
- ▶ High whiteness
- ▶ Good scrub/burnish resistance
- ▶ Film breathability

OpTiMat™

An engineered alumino-silicate characterised by its specific particle shapes and particle size distribution conferring unique properties to coatings. OpTiMat™ results from the latest processing technology able to guarantee particle size distribution offering consistent quality.

Benefits in coatings include:

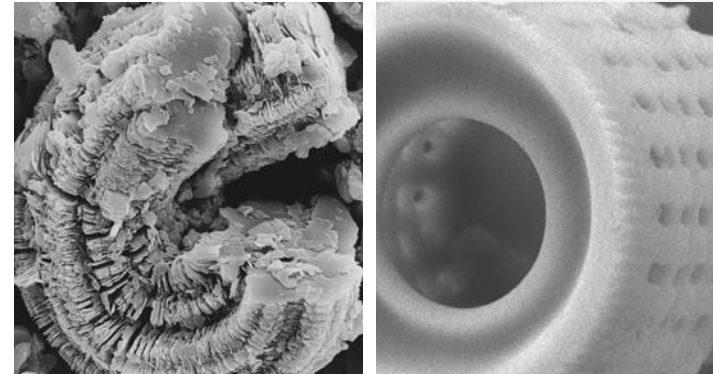
- ▶ Excellent matting performances
- ▶ High whiteness
- ▶ Good scrub/burnish resistance
- ▶ Density reduction

HYDROUS KAOLIN

Kaolin is characterised by its lamellar or platy particle shape, its fine particle size and its chemical inertness. The combination of platy shape and fine size results in improved spacing of TiO₂ particles in a paint film and improved opacity. Kaolin particles also have surface hydroxyl groups, which contribute to thixotropy in water-based paints via hydrogen bonding.

Benefits in coatings include:

- ▶ Excellent TiO₂ extension
- ▶ Favourable rheology
- ▶ Gloss control



CALCINED KAOLIN

IMERYS offers specialised calcined kaolin from its production plants in the UK and USA. These high performance kaolins provide an excellent balance of properties in decorative and industrial coatings including improved optical performance and the potential for the reduction of formulation raw material costs.

Benefits in coatings include:

- ▶ High opacity
- ▶ High whiteness
- ▶ Good gloss control
- ▶ Potential for significant cost savings

MICA

Mica is a naturally occurring phyllosilicate, that is available in a wide range of particle sizes. Micronised, wet ground, dry ground, delaminated and non delaminated grades are available from Europe and USA deposits.

Benefits in coatings include:

- ▶ Excellent mud cracking resistance
- ▶ Improved barrier properties
- ▶ Good exterior durability

PERLITE

Perlite is highly siliceous volcanic glass, containing from 2 to 5 percent combined water. When rapidly heated to the proper temperature, the vaporisation of the water and the simultaneous softening of the glass cause the perlite to suddenly expand, or "pop" into lightweight cellular particles.

Benefits in coatings include:

- ▶ Texturing effect
- ▶ Density reduction (lightweight for stucco)
- ▶ Good exterior durability

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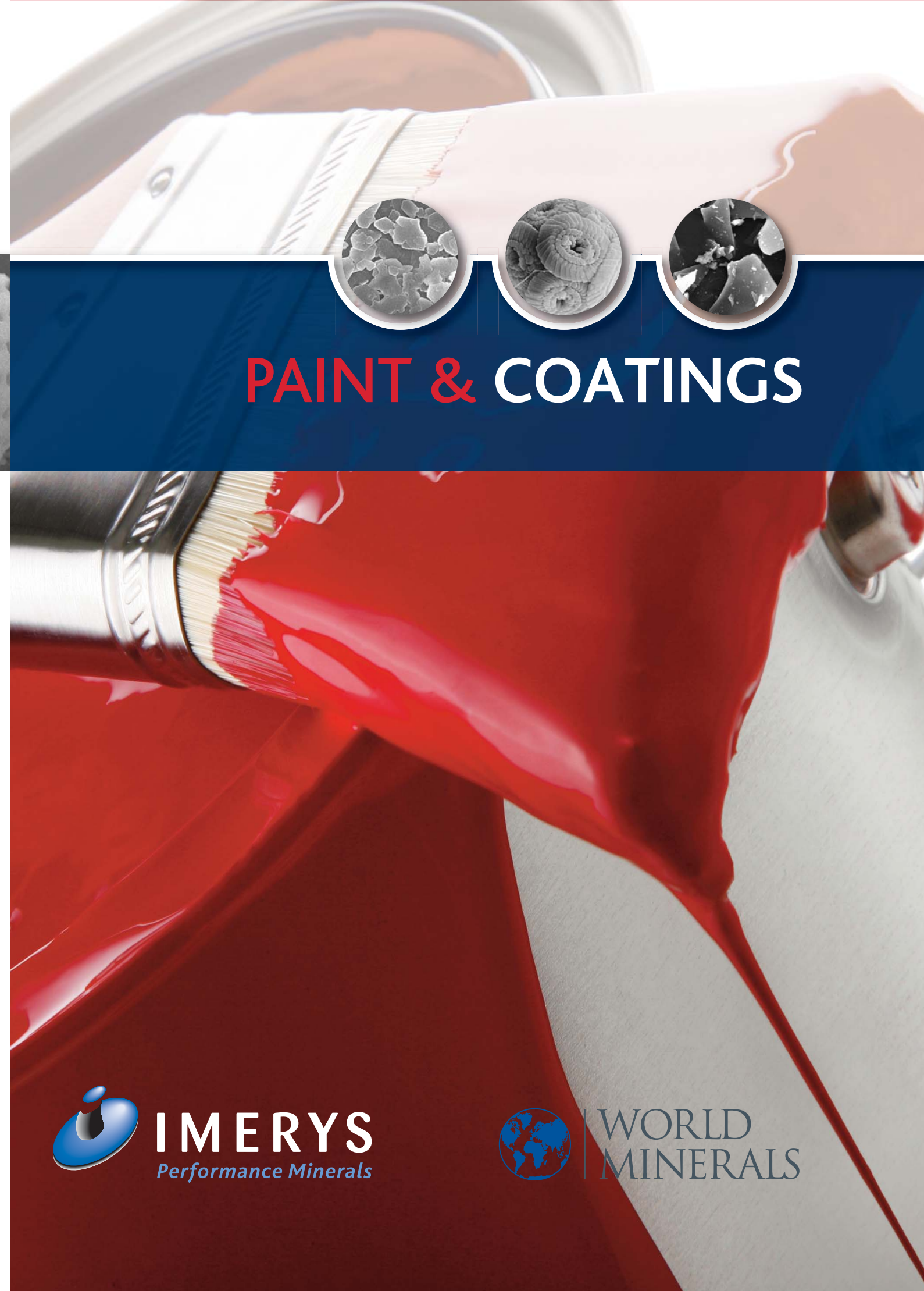
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IMERYS
Performance Minerals



**WORLD
MINERALS**

A WORLDWIDE INDUSTRIAL GROUP

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

IMERYS SUPPLIES MINERALS TO A WIDE RANGE OF INDUSTRIES, INCLUDING POLYMERS, PAINT, PAPER, FILTRATION 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 high quality mineral extenders to the paint and ink industries throughout the world.

Our extensive range of products include: aluminosilicates, calcium carbonates, dolomite, diatomite, kaolins, calcined kaolins, perlite and mica. We specialise in high performance extenders that can improve paint performance and deliver significant savings in prime pigment levels.

All our products are backed up by a high standard of technical service, product development and research from a global team of highly experienced scientists and industry specialists. Our aim is to work actively with our customers to develop new and unique solutions to solve their technical challenges.

FUNCTIONAL EXTENDERS FOR HIGH PERFORMANCE COATINGS

Our products provide the coatings formulator with a unique portfolio from which to select the extenders and additives required to obtain the desired balance of properties and coating performance. Our expertise in mining and processing, combined with our years of continued involvement in the coatings industry, allows us to meet the specific needs of our customers and the rigid requirements of the most exacting paint formulations.

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HIGH PERFORMANCE & VERSATILITY

IMERYS products are used extensively in the paint and coatings industry. The diverse range of structures, chemical and thermal stability, whiteness and relatively low specific gravity make these minerals useful additions in a number of applications.

PRIMARY PIGMENT EXTENSION

The wide choice of particle size, shape and morphology available from Imerys products allows the coatings formulator to select the most appropriate products to reduce pigment crowding and improve pigment extension. The finer particle size products may also improve the primary pigment spacing enabling the coatings producer to formulate more cost effective or higher performance products.

EXCEPTIONAL MATTING EFFICIENCY

The unique morphology and narrow particle size distribution of our products enables very effective matting while limiting the number of undesirable particles and associated properties.

VERSATILITY

IMERYS products provide exceptional performance in both solvent and water-based formulations at high and low Pigment Volume Concentration (PVC).

REDUCED SYNERESIS, SETTLING & DRY TIME

The low bulk density and high bulking value of our diatomite products, help control syneresis and in-can settling. Additionally, our unique particle structures reduce dry time and increase vapour permeability. Similar improvements in reduced syneresis and settling can also be found when using our platy, Hydrous Kaolin products.

SCRUB & BURNISH RESISTANCE

The high Moh's hardness of our Diatomite products, combined with uneven particle shape, provides excellent resistance to scrubbing and burnishing.

COLOUR & TINT STRENGTH

Where whiteness is important we offer products with low "b" values, providing a bluish undertone and cleaner tint. Furthermore, **IMERYS** products enable excellent tint retention in deep and accent base paint lines.

OTHER ADVANTAGES?

Depending on the formulation, our materials can also modify rheology, paint stability, stain resistance, improve mudcrack resistance and barrier properties.