



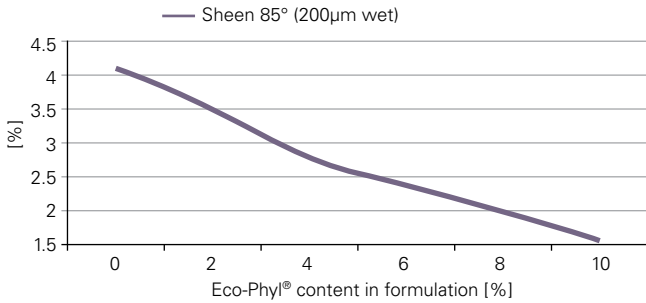
ECO-PHYL[®]

A multi-functional filler for interior and exterior decorative systems

- Improved matting and weather resistance
- EC Ecolabel compliant
- Ideal for low- and zero-VOC systems

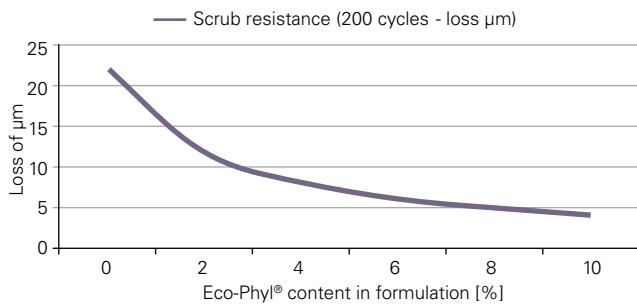
Influence on sheen (85° gloss)

Eco-Phyl® is an excellent matting agent. Unlike non-lamellar fillers, it enables formulators to achieve a significant matting effect without losing opacity.



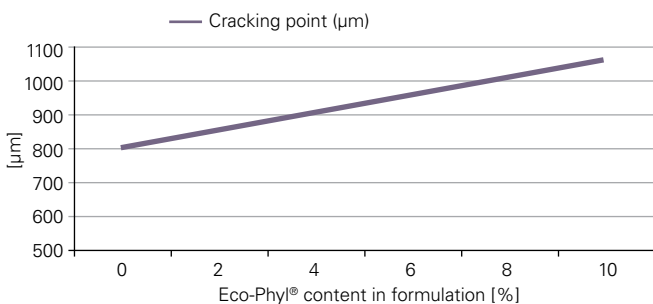
Influence on scrub resistance

Eco-Phyl® improves scrub resistance. In tests, the formulation which did not contain Eco-Phyl® was a Class 3 system. Adding 10% Eco-Phyl® enabled the same formulation to be upgraded to Class 1.



Influence on cracking

To study the influence of Eco-Phyl® on cracking, the paints were applied in wedge profile from 300µm up to 1500µm. The graph shows the thickness where cracking begins. The addition of Eco-Phyl® significantly reduces cracking in decorative paints. It also reduces the tendency to crack at a lower organic resin content.



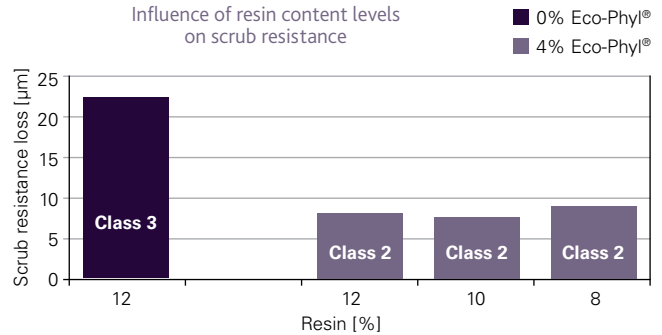
Resin reduction

To test further cost reduction possibilities, the formulation which did not contain Eco-Phyl® was compared with formulations containing 4% Eco-Phyl® but at a reduced resin content (8% instead of 12%).

Paint components (wt %)

Component	0% Eco-Phyl	4% Eco-Phyl	4% Eco-Phyl (8% Resin)	4% Eco-Phyl (12% Resin)
Water + additives	33.0	33.0	35.0	37.0
TiO ₂ - Rutile	8.0	8.0	8.0	8.0
ImerCarb™ 3L	18.0	18.0	18.0	18.0
ImerCarb™ 5L	26.0	22.0	22.0	22.0
Jetfine® 1	3.0	3.0	3.0	3.0
Eco-Phyl®	0.0	4.0	4.0	4.0
Vinyl acetate copolymer, MFT 0°C, 53%	12.0	12.0	10.0	8.0
Total	100.0	100.0	100.0	100.0

Influence of resin content levels on scrub resistance



The formulation without Eco-Phyl® falls under Class 3. Even at a significantly reduced resin content, the formulation with 4% Eco-Phyl® demonstrates better scrub resistance (Class 2).

ECO-PHYL® IN EXTERIOR DECORATIVE PAINTS

Eco-Phyl® is also highly recommended for exterior facade systems where its lamellar particle shape and unique mineralogical composition improve long-term durability.

Eco-Phyl® improves:

- crack resistance at higher film thickness
- elasticity of the paint film
- long-term weather resistance
- chalking
- colour stability

These benefits are particularly important in formulations with lower organic resin content such as silicate or silicon facade paints.

CONCLUSION

Eco-Phyl® is ideal for new-generation decorative paint systems that meet EC Ecolabel requirements. It enables formulators to diminish resin content, with the added advantage of reducing the overall environmental footprint of their products.

Eco-Phyl® combines ecological benefits with the high performance requirements of modern formulation techniques.

ABOUT IMERYS

Imerys is the world leader in mineral-based specialty solutions for industry. We transform a unique range of minerals to deliver functional specialty solutions that are essential to customers' products and manufacturing processes. With 300 scientists, eight research and technology centres, 21 market-focused regional laboratories and close ties with renowned research institutes, we lead the way in engineering minerals for industry.

ABOUT PERFORMANCE ADDITIVES

Performance Additives is a division of Imerys. With over a hundred years' experience in the minerals business, we offer customers engineered solutions derived from our portfolio of mica, talc and wollastonite. We refine and engineer these minerals through various—often proprietary—processes that influence their concentration, size, shape, structure and surface chemistry to obtain the exact properties our customers require. Each year, we process thousands of tons of materials to the highest standards of quality, consistency and reliability.

Our coatings team has in-depth knowledge of paint and coating processing, of how minerals interact in the application and a proven track record for developing new, value-added solutions for customers. Our product and applications laboratories are equipped with a full range of analytical and coatings-specific equipment enabling us to spearhead applications innovation as well as to provide customers with bespoke formulation services and technical support.

DELIVERING THE GOODS

With production sites in Australia, Belgium, Canada, France, Italy, Japan, Mexico, Spain and USA we are able to provide customers with optimised logistics and costs. Our sales administrators organise the optimum transport, warehousing and product delivery form to meet our customers' specific needs.

MEETING TODAY'S NEEDS, SECURING TOMORROW'S

We believe that running a successful business and sustaining quality of life and the environment go hand in hand. From implementing behaviour-based safety training to rehabilitating the land, we think it's important that future generations' needs are not compromised by our actions today.

OUR FUNDAMENTAL SUSTAINABILITY PRINCIPLES

- **SAFETY** - We promote the health and safety of employees, contractors, customers, neighbours and consumers through active caring.
- **PARTNERSHIP** - We seek to understand the issues that are important to our neighbours, and to make a lasting contribution to the communities in which we operate.
- **ENVIRONMENTAL PROTECTION** - We work to minimise our environmental footprint by using natural resources efficiently, preventing pollution, complying with applicable laws and regulations and continually improving our performance.
- **ACCOUNTABILITY** - We conduct business in an accountable and transparent manner, relying on external auditing and reporting to understand and reflect our stakeholders' interests.
- **PRODUCT STEWARDSHIP** - We are committed to ensuring that our products are safe for people and the environment, employing best available technology and following best-in-class procedures to ensure that our standards and practices meet or exceed safety requirements everywhere we do business.



We conduct life cycle assessments (LCA) at all our operations to quantify the environmental effects associated with producing our products from the mine to factory gate, and to identify areas for improvement. Likewise, we compile life cycle inventories (LCI) of the energy consumption, materials used and emissions generated by each of our product ranges. These LCI can be made available to customers and research institutions on request.



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