

CONSTRUCTION INDUSTRY | DISPERSIBLE POLYMER POWDER

FOUNDATION MAKE-UP FOR WALLS & CEILINGS

Skim Coat

SKIM COAT

FIRST IMPRESSIONS COUNT

You only get one chance to make a first impression. Smooth, clean surfaces on exterior and interior walls put everyone in a good mood.

VINNAPAS® is a registered trademark of Wacker Chemie AG.

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THE EASIEST AND FASTEST WAY *TO CREATE A PERFECT SURFACE*



The term “skim coat” was coined in Asia in the early 1980s, where the skim coat technique was developed. This technique involves applying a coat by skimming. With an average thickness of between 0.5 and 2 mm, a skim coat is usually applied in two layers. This technique has become increasingly popular in the construction industry, not only in Asia but also in, for example, Saudi Arabia, UAE, North Africa, Brazil, not to mention parts of Europe.

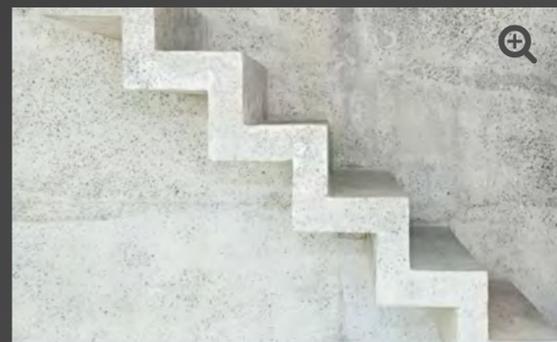


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WIDE APPLICATION *SPECTRUM*

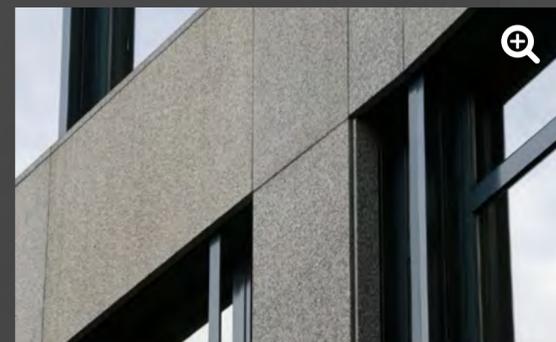
The versatility and durability of skim coat have made them a popular choice for both interior and exterior surfaces on a wide range of substrates.



Concrete



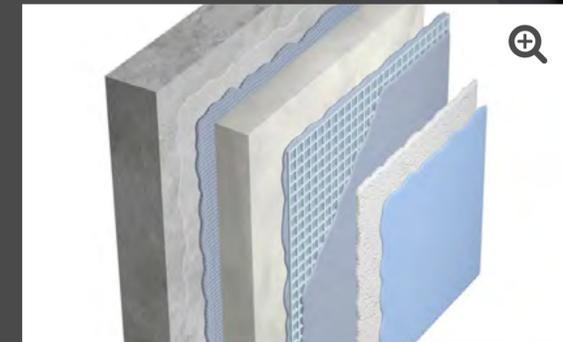
Cement Render / Plaster



Fiber Board



ALC Blocks



ETICS Surface

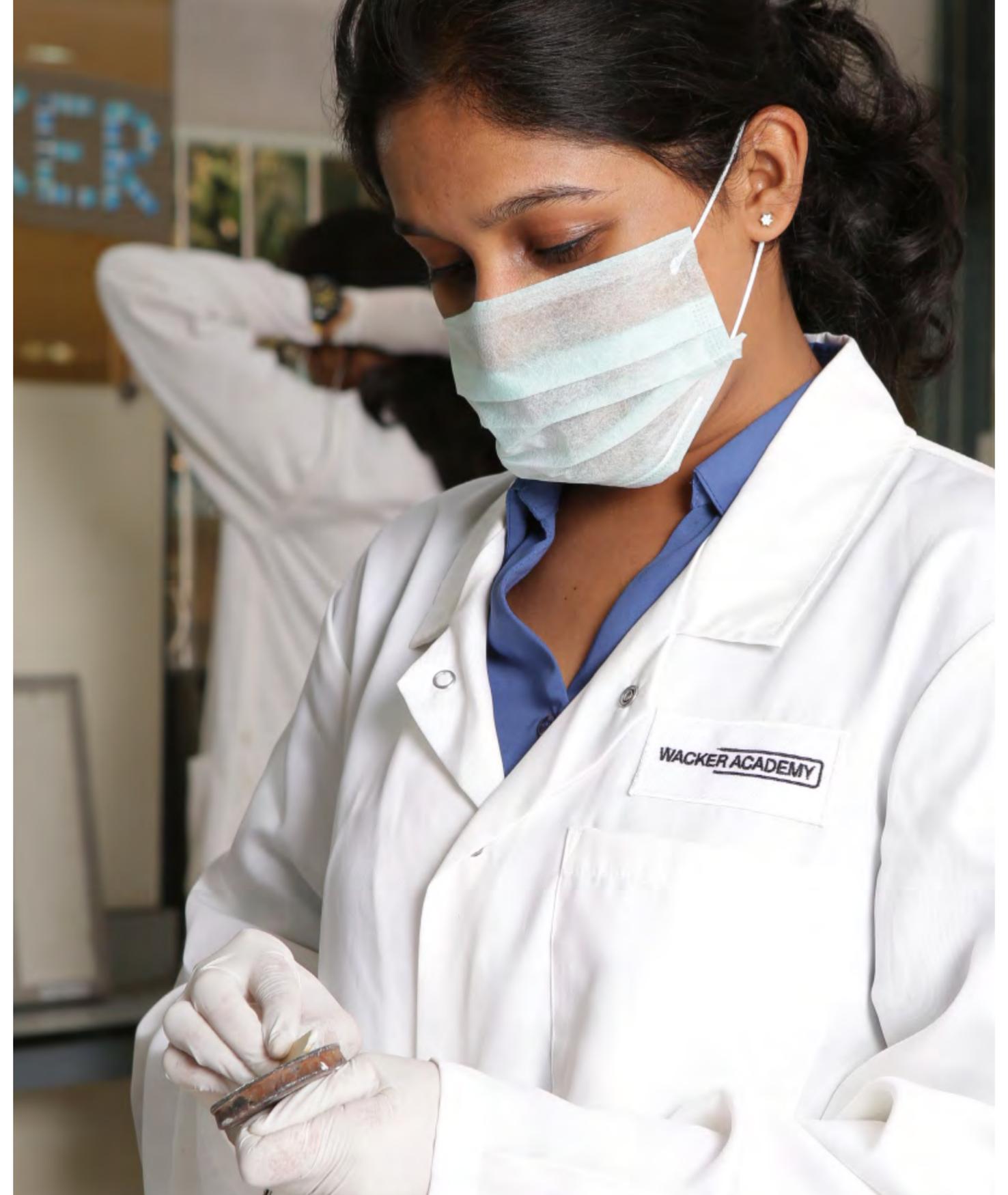
HOW VINNAPAS® AFFECTS *SKIM COAT*

Skim coat must meet certain physical and technical requirements if they are to function properly. Although there are no international standards defined for skim coat yet, different countries set their own specifications in accordance with local conditions, such as climate, applications, techniques and, local construction codes.

In skim coat formulations, VINNAPAS® dispersible polymer powders greatly improve flexibility, workability and adhesion, especially on critical substrates, such as concrete.

Depending on the VINNAPAS® grade and dosage, a skim coat can also be given additional properties, such as hydrophobicity. At WACKER, we conduct comprehensive tests as regards all the critical requirements for achieving an effective skim coat.

Unmodified mortar and mortar modified with VINNAPAS® polymer powder.



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THE BENEFITS OF *HIGH-QUALITY SKIM COAT*

Polymer modification with VINNAPAS® makes it possible to formulate high-quality skim coat that not only benefit applicators in terms of application, but also provide an aesthetic finish which is durable and long-lasting.

Effects of polymer modification





VINNAPAS® DISPERSIBLE POLYMER POWDERS

BEST IN CLASS SINCE 1955

WACKER was one of the first companies to manufacture dispersible polymer powders on an industrial scale. To this day, our VINNAPAS® products remain the technology and market leaders for modifying dry-mix mortars. We will keep on refining our portfolio – we'd be happy to work with you to meet your specific needs. [Talk to us!](#)

Over 70 years of development:
Milestones of VINNAPAS® history

To simplify your choice, we have summarized our VINNAPAS® grades into six product classes.



VINNAPAS® N Class – Rheologically Neutral
Ensures a high level of formulation flexibility and a diverse range of applications.



VINNAPAS® E Class – Improved Properties
Improves properties in many applications, making products easier to process, more adhesive and more water resistant.



VINNAPAS® T Class – Highly Thixotropic
Ensures excellent thixotropic properties, as required in thixotropic tile adhesives and smoothing and/or leveling compounds.



VINNAPAS® H Class – Excellent Hydrophobicity
Ensures remarkable hydrophobic properties in all kinds of plasters, grout mortars and external thermal insulation composite systems (ETICS/EIFS).



VINNAPAS® F Class – Superior Flow Properties
Ensures outstanding flow properties without the addition of synthetic superplasticizers or casein. A 2-in-1 solution suitable for self-leveling compounds and troweling compounds requiring fast processing.



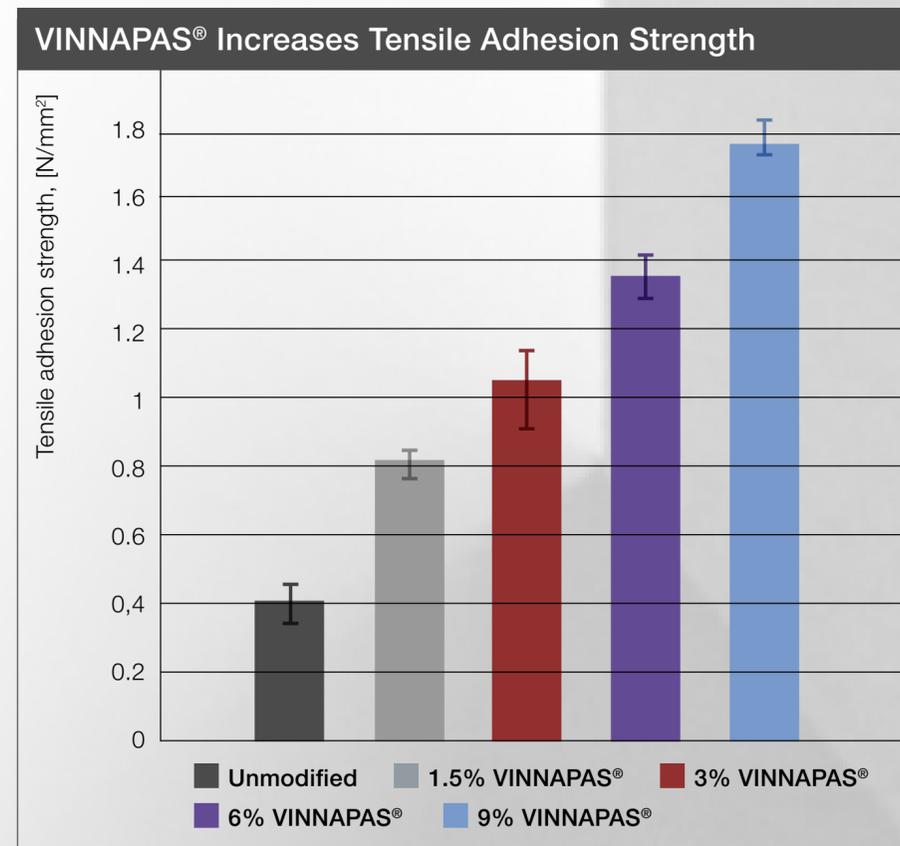
VINNAPAS® L Class – Optimized Leveling
Ensures smooth surfaces with outstanding leveling properties; suitable for self-leveling flooring compounds, etc.



ADHESION

A CLOSER LOOK

Modifying a skim coat with VINNAPAS® increases both tensile adhesion strength and paint adhesion. This is demonstrated in our technical center by standardized testing.



Tensile adhesion strength after storing at 23±2°C and 50±5 %relative humidity.

Increasing the dosage of VINNAPAS® results in improved tensile adhesion strength. [Info on testing method.](#)



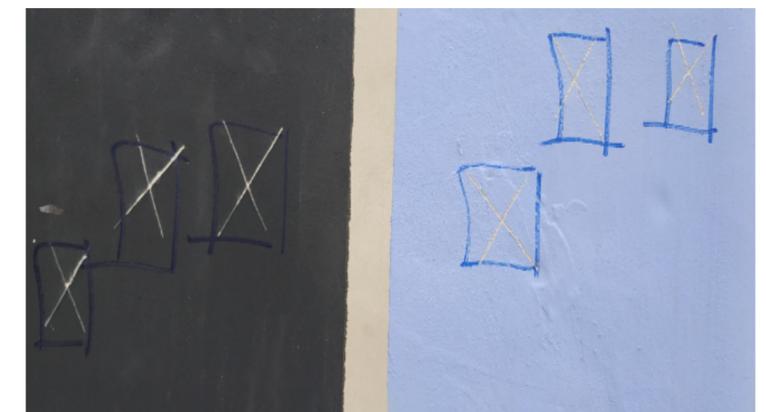
A skim coat modified with VINNAPAS® improves paint adhesion. [Info on testing method.](#)



Unmodified



0.5% VINNAPAS®



1% VINNAPAS®



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CRACK RESISTANCE *A CLOSER LOOK*

When exposed to changes in humidity or temperature, all building materials tend to react by expansion or shrinkage. This often causes cracks in the topcoat. VINNAPAS® increases the skim coat's flexibility and flexural strength so that they can cope with a substrate's typical dimensional changes without cracking.

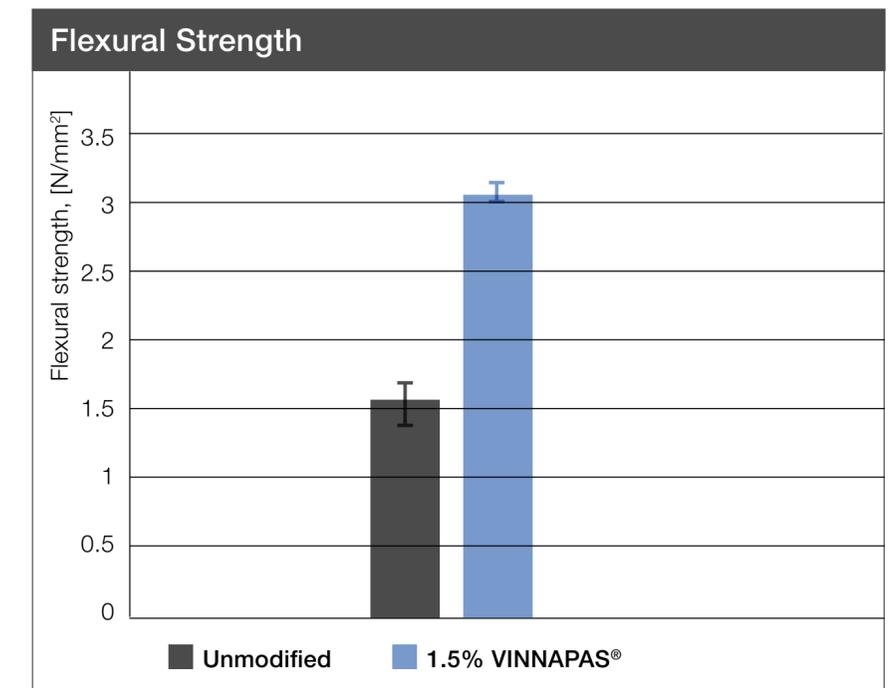


Flexibility test: A skim coat modified with VINNAPAS® is applied to a tin plate. Its flexibility is then tested. The small roll (50-mm cylinder) in the foreground is used for an interior skim coat, the large roll (100-mm cylinder) in the background is used for an exterior one.



Flexural strength test

Our technical center measures a skim coat's flexural strength as per EN 1015-11. 40 mm x 40 mm x 160 mm samples are exposed to standard conditioning (SC): 23 °C, 50% relative humidity. Flexural strength is measured after 28 days' SC.



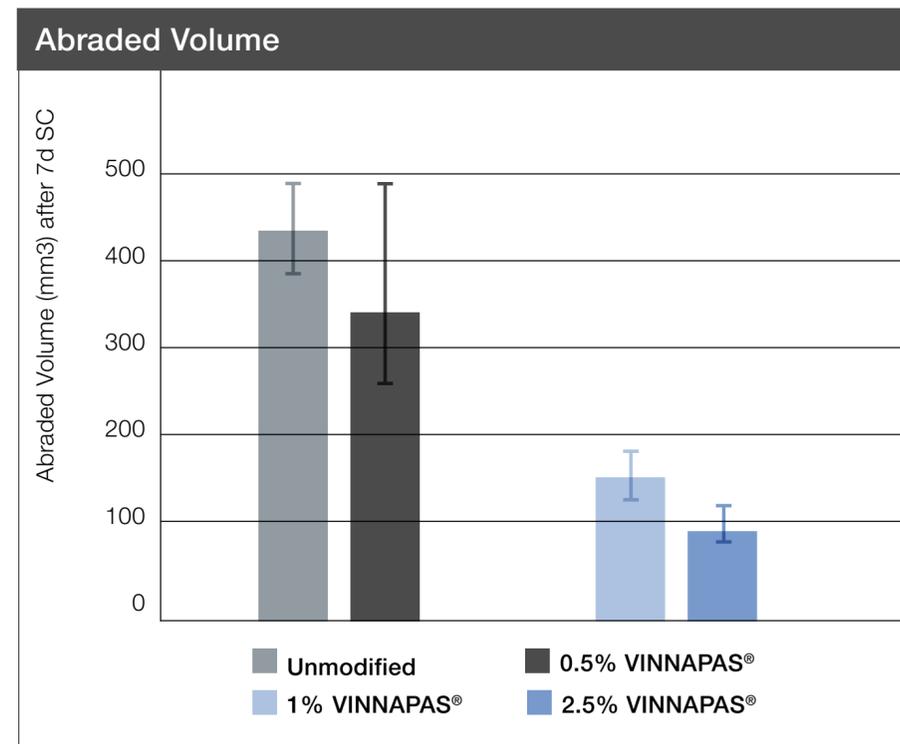
Flexural strength after conditioning: 7 days at 20±2°C and 95±5% relative humidity plus 21 days at 23±2°C and 50±5% relative humidity.



ABRASION RESISTANCE

A CLOSER LOOK

Adding VINNAPAS® increases resistance to chalking and abrasion. The higher the VINNAPAS® content, the better the result.



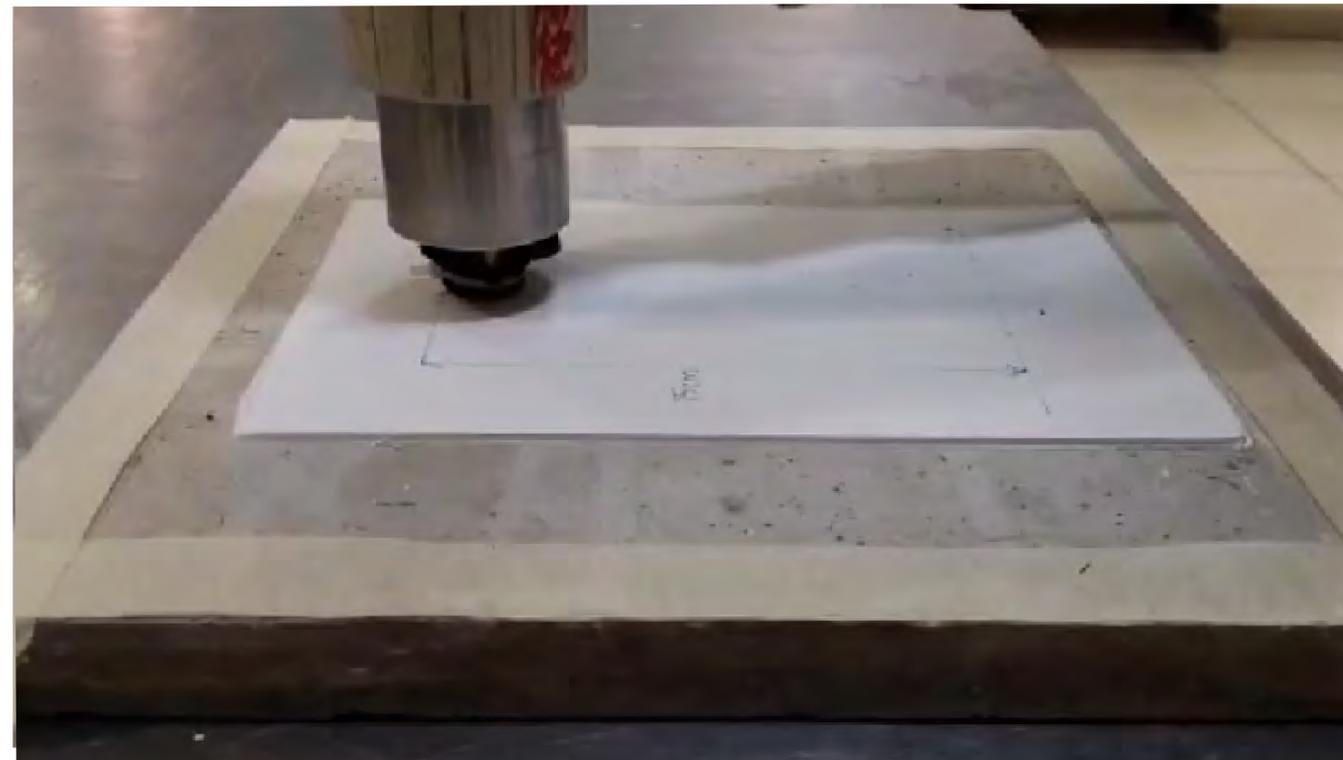
Info on testing method.



Increasing the dosage of VINNAPAS® reduces chalking and improves abrasion resistance.



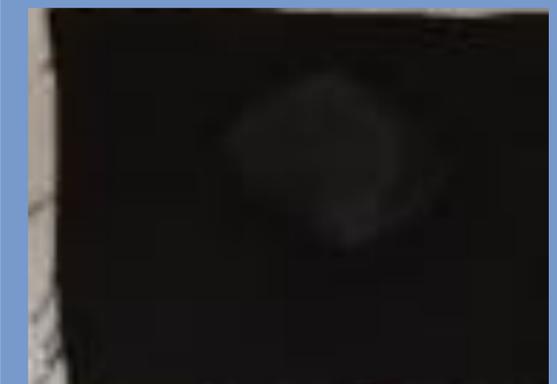
Unmodified



Recently developed test to obtain standardized results regarding chalking.



1% VINNAPAS®



2.5% VINNAPAS®



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DURABILITY

A CLOSER LOOK

At WACKER, exterior skim coat are tested in the lab and under real-world conditions to obtain data for long-term durability.



At our technical center in Singapore, different skim coat formulations are exposed to weathering before testing. This gives interesting insights into the long-term behavior of a skim coat.

Improved durability:
Test results after natural weathering for six months

A skim coat with and without VINNAPAS®, covered with high-gloss water-based exterior paint:

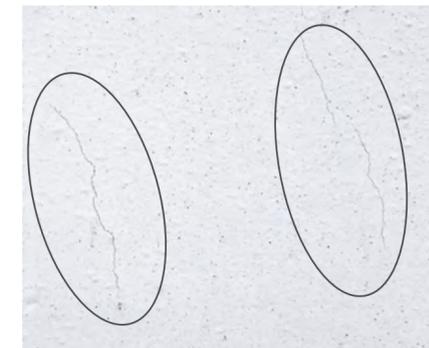


Unmodified skim coat:
Poor paint adhesion occurs.
Paint peels off.

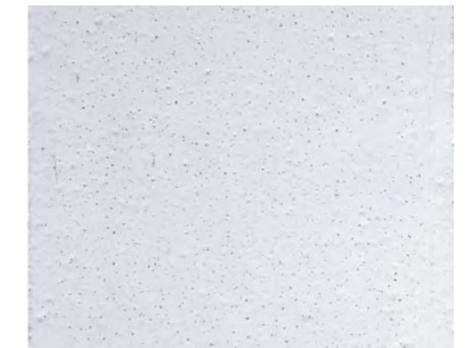


Skim coat modified with 2.5% VINNAPAS®:
no cracks are visible.

Skim coat with and without VINNAPAS®:



Unmodified skim coat surface: cracks are visible.



Skim coat modified with 2.5% VINNAPAS®: the surface is smooth and free of cracks.





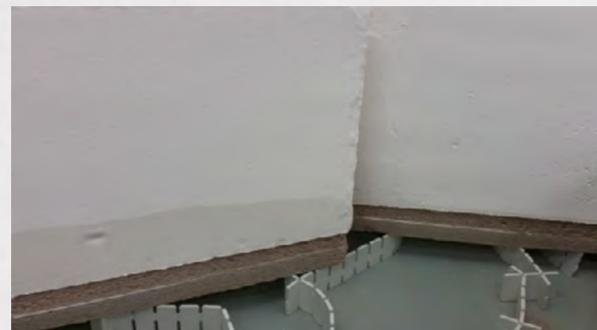
HYDROPHOBICITY

A CLOSER LOOK

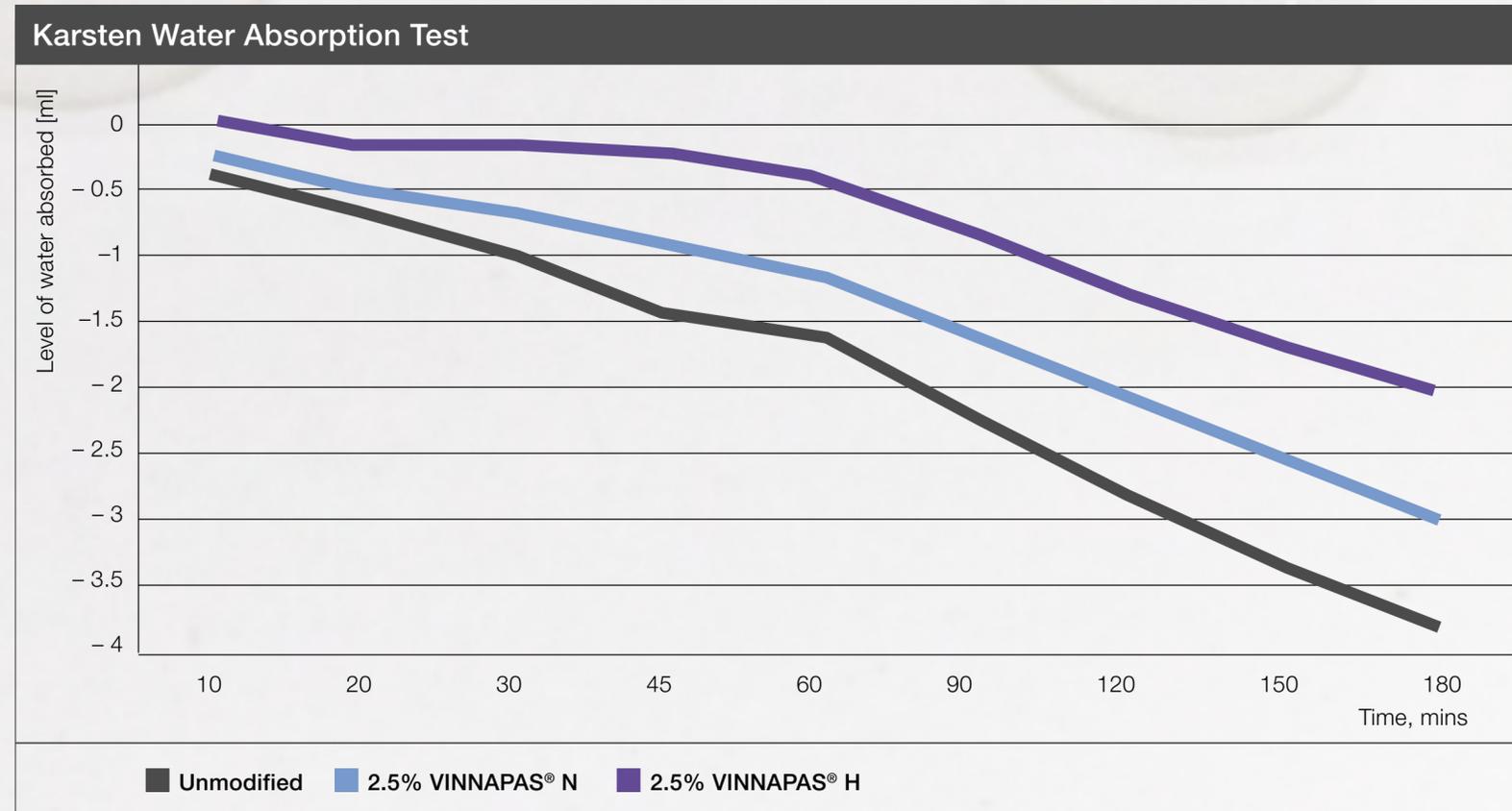
All VINNAPAS® grades reduce the water absorption of skim coats. If VINNAPAS® H hydrophobic grades are chosen, this effect can be substantially enhanced. VINNAPAS® H grades even improve water resistance while preserving water-vapor permeability.



Hydrophobicity improved by using VINNAPAS®



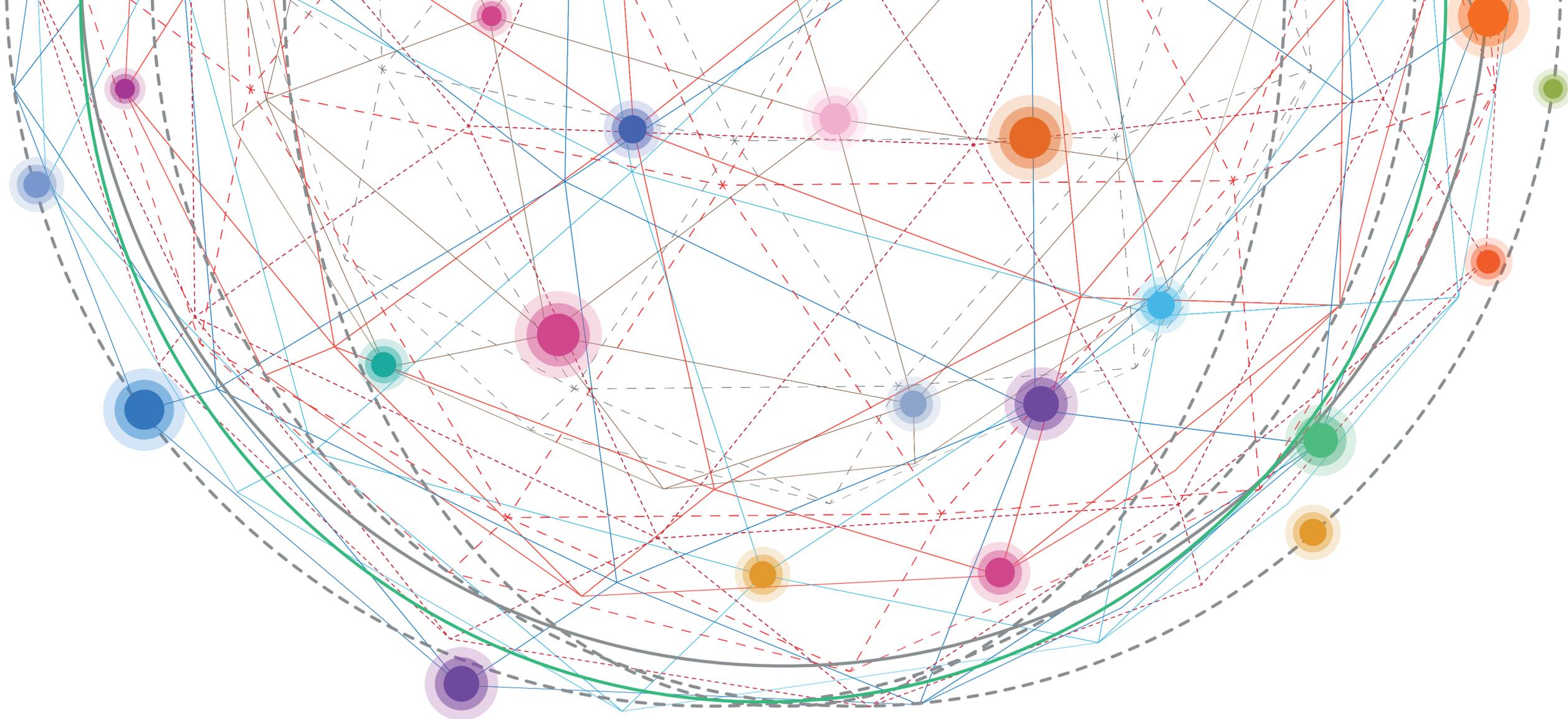
Aerated lightweight concrete, in particular, profits from a hydrophobic skim coat. The porous surface requires water-repellent plaster and skim coat to increase durability.



Water Absorption Using Karsten Tube Test

The Karsten tube test is used to test water penetration in building materials and building components. Test conditions widely correspond to natural ones, especially with regard to wind pressure and torrential rain hitting facades. This test allows precise determination of water penetration relative to time and surface area penetrated.





TECHNICAL CENTERS: GLOBAL SUPPORT

Formulating a polymer-modified skim coat can be a complex process – there is no universal formulation. Cement varies from one place to another. A skim coat can be based on white and gray cement or can even be cement-free. Regional market conditions play a role as well:

Which price segment is right for the finished skim coat? Are there any standards and laws that play a role? In order to work with customers on optimizing products for local demands, WACKER took an early lead in establishing technical centers (TCs)

all over the world. Experts at our centers will provide you with the advice and support you need to succeed in your market. To get more information online, please go to: www.wacker.com/skim-coat

Knowing What a Product Can Do
Testing customer formulations in line with established standards provides reliable information on product performance. Parameters we test include tensile adhesive strength, flexural strength and hydrophobicity based on regional and international standards.



Mumbai



Singapore



Jandira



Dubai





THE WACKER ACADEMY *CONNECTING THE BEST*

The global forum for learners, networkers, creators and discoverers
WACKER ACADEMY offers cutting-edge expertise for regional markets.
Participants can meet and swap experiences with colleagues from similar
areas – at 14 locations around the world.



CREATING TOMORROW'S SOLUTIONS

A Diverse Array of Products for Growing Markets

Our product portfolio ranges from silicones, binders and polymeric additives all the way up to bioengineered pharmaceutical actives. Rounding these out is hyperpure silicon for semiconductors and solar applications.

Innovations that Improve Quality of Life

As a technology leader focusing on sustainability, WACKER promotes products and ideas that offer a high value-added potential to ensure that current and future generations enjoy a better quality of life, based on energy efficiency and protection of the climate and environment.

Global Knowledge for Local Markets

When you work with WACKER, you have 100 years of chemistry expertise at your disposal, with access to the research findings and best practices of our experts throughout the world. Our knowledge base consists of a network of 23 technical centers, 14 training centers and our basic research center.

And most importantly: we are there wherever you need us – worldwide. Our local specialists know your markets and speak your language. Working with them, you will find innovative solutions that win over your customers and make you more competitive.

Follow us:

Find us on LinkedIn, YouTube and Twitter, and we'll keep you up to date on the latest and discuss current issues with you.



All figures are based on fiscal 2020.



Silicones and Polymers
3,200 specialty products from organic and inorganic chemistry



Global Market Leader
In dispersions and dispersible polymer powders based on vinyl acetate-ethylene (VAE), in building-protection silicones and in the production of cyclodextrin and cystein.



Globally Active

- Sites worldwide
- Headquartered in Munich
- 26 production sites in Europe, Asia and the Americas
- 23 technical centers
- 14 WACKER ACADEMY training centers
- 52 sales offices



Employees: 14,300



Total Sales
€4.69 billion



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