

**WACKER**

CREATING TOMORROW'S SOLUTIONS

ELASTOSIL®

PRIMIS®

SILRES®

VINNAPAS®

MIDDLE EAST & AFRICA | TECHNICAL CENTER

**TECHNICAL SUPPORT  
FOR YOUR SUCCESS**

Technical Center Dubai



## BECAUSE GLOBAL IS LOCAL

Whether for new application ging customer expectations, growing competition or new governmental regulations, nearly all industries are forced to optimize their products and processes today continuously. At WACKER, we not only offer you a wide range of state-of-the-art specialty products, but also the technical assistance to make your solutions work. This is why we have established a technical center in Dubai with extensive lab capacities for different industries.

### Use Our Worldwide Experience

WACKER has been a global partner to many industries for over 100 years. With our technical centers around the world, we work side-by-side with customers on new applications, or to adapt products to region-specific requirements. As an innovation-focused company, WACKER can draw on decades of R&D and unparalleled application consulting.

### Work with Seasoned Experts

The Dubai technical center is made up of highly specialized, application-focused labs, which support customers from the Middle East and Africa. Our experts offer their extensive knowledge and state-of-the-art test methods developing value-adding products and formulations.

### Benefit from Modern Technology

The ultramodern technical center labs in Dubai comply with ISO 17025, enabling the testing of construction materials and paints in accordance with international standards such as ISO, EN and DIN.

The sales office is located under the same roof, facilitating a close interface between the sales and technical teams, while creating ideal conditions for providing customer support.

### Profit from Shared Knowledge

Integrated into the technical center is the WACKER ACADEMY, a unique training institution. Based on WACKER's worldwide experience and our regional knowledge gained in the Middle East, the WACKER ACADEMY offers a program tailored to the region's key trends in various industries. For more information, visit [www.wacker.com/wacker-academy](http://www.wacker.com/wacker-academy)

### How to Find Us



[www.wacker.com/mea](http://www.wacker.com/mea)



ETICS specimen preparation; measuring tensile adhesion for ceramic tile adhesives applications; testing compressive and flexural strength for tile grout applications; testing hydrostatic pressure for waterproofing samples.

## MORTARS AND CEMENTITIOUS SYSTEMS

The functionality of mortars and other cementitious systems is crucial to many construction tasks. We can help you optimize key properties of your products, adapt them to meet new customer requirements or reformulate them for new applications.

Key to this expertise is our 50 years of experience in the use of organic and inorganic mortar additives, their compatibility and possible side effects. With VINNAPAS® dispersible polymer powders, we are pioneers and technology leaders in formulations containing organic binders, cellulose ethers, rheology-controlling additives and superplasticizers.

This enables us to develop for you the perfect dry-mortar formulation for mortars that will meet national and international standards, as well as current requirements concerning workability, environmental compatibility and value stability.

We offer support in the development and optimization of:

- Tile adhesives
- Mortar components for exterior thermal insulation composite systems (ETICS)
- Self-leveling compounds
- Shotcrete
- Other dry-mortar and pasty construction products

We offer assistance in:

- Assuring defined water uptake/hydrophobicity
- Controlling and adjusting air content
- Hardening and setting of hydraulic and non-hydraulic systems
- Handling of different kinds of accelerators and retarders
- Reinforcing mortar with fibers

Does your product meet local construction requirements? Is it suitable for the specific climatic conditions? Does its formulation have to be adapted to the raw materials of the region?

A team of highly-trained specialists provides technical support, answers questions on formulations, provides training for customers' technical personnel and works closely with official standardization institutions.

### Accredited Tests as per ISO 17025

Test Method	Application	EN DIN
Density of fresh mortar	All mortars	EN 1015-6
Waterproofing systems	Sealing slurries	EN 14891
Compressive & flexural strength	Self-leveling compounds / screeds	EN 13892 – 2
Flow test	Self-leveling	EN 12706
Slip resistance	Tile adhesives	EN 12004 – 2
Deformability	Tile adhesives	EN 12004 – 2
Open time	Tile adhesives	EN 12004 – 2
Tensile adhesion strength	Tile adhesives	EN 12004 – 2
Abrasion resistance	Tile grouts	EN 12808-2
Compressive & flexural strength	Tile grouts	EN 12808-3

### Additional Tests

Test Method	Application	EN DIN
Air content of fresh mortar	All mortars	EN 1015 – 7
Compressive strength of mortar	All mortars	EN 1015 – 11
Consistency and plasticity of fresh mortar	All mortars	EN 1015 – 3
Density of mortar (cured)	All mortars	EN 1015 – 10
Determination of bond strength of hardened mortars	All mortars	EN 18555 – 6
Determination of water impermeability	All mortars	DIN 1048 – 5
Flexural strength of mortar	All mortars	EN 1015 – 11
Particle size distribution	All mortars	EN 1015 – 1
Water retention of fresh mortar	All mortars	DIN 18555 – 7
Water uptake of mortar	Masonry mortars	EN 1015 – 18
Water vapor permeability	Masonry mortars	EN 1015 – 19
Screed materials	Self-leveling	EN 13813
Water Absorption	Tile grouts	EN 12808 – 5



Exterior paint samples are tested under local climatic conditions at WACKER's outdoor weathering station in Dubai.

## ARCHITECTURAL COATINGS

To meet the demands of the modern paints and coatings industry, products must offer high quality and performance while complying with strict environmental and safety standards. Mature markets may be saturated, but the architectural paint sector is still growing globally as paint consumption in emerging regions increases thanks to growing disposable incomes.

### Interior Paints

In interior applications, paints with a low content of volatile organic compounds (VOCs) are becoming more and more important. To support this trend, vinyl acetate-ethylene (VAE) dispersions are increasingly becoming the industry standard for interior paints, as the reduced need

for coalescing solvents reduces odor and lowers formulation costs. WACKER is a market leader for VAE dispersions, meeting the highest technical demands and requirements of the most stringent ecolabels. Most of our VAE dispersions are manufactured without the use of alkylphenol ethoxylates (APEO) or formaldehyde donors and enable the formulation of coatings without adding plasticizers or solvents. Besides complying with environmental standards, products must perform well in the application, showing excellent scrub resistance, touch-up properties and durability. All of these properties depend on the paint binder. VINNAPAS® VAE technology offers an attractive balance of high performance, environmental benefits and cost-in-use.

### Exterior Paints

Silicone resin emulsion paints rank among the most advanced facade coating systems: they are hydrophobic, yet permeable to water vapor, and are characterized by high hiding power and extremely long life. As environmentally compatible raw materials, they actively contribute to preserving the value of every structure. With SILRES® BS silicone resins WACKER is a leading partner for the formulation of silicone resin, paints and can help you to find the perfect facade coating for your specific market needs.

Our PRIMIS® and VINNAPAS® dispersions are highly compatible with SILRES® BS silicone resins, making them ideal for manufacturing silicone resin emulsion paints. But also on their own, PRIMIS® and VINNAPAS® dispersions represent an attractive

alternative to conventional acrylic and styrene-acrylic systems for exterior paints, as they feature low dirt pick-up and excellent color stability.



Testing the water beading effect

### Bitumen Applications

Test Method	Standard
Elongation test	WACKER method
Elastic recovery	WACKER method
Tensile adhesion	EN 14891
Hydrostatic pressure	EN 14891

### Accredited Tests for Interior Paints as per ISO 17025

Test Method	Standard
Gloss development	ASTM D523
Blocking resistance	ASTM D4946
Wet-scrub resistance and cleanability of coatings	DIN EN ISO 11998
Wet-scrub resistance after 7 days 23 °C/50% re. hum.	ASTM D2486, (180 µm wet film thickness)

### Accredited Tests for Exterior Paints as per ISO 17025

Test Method	Standard
Liquid water transmission, rate w24-value [kg/m2h0,5]	EN 1062 – 3
Water vapor permeability, wet-cup, sd-value	EN ISO 7783 – 2
Wet-scrub resistance after 7 days 23 °C / 50% re. hum.	ASTM D2486, (180 µm wet film thickness)
Quantifying dirt pick-up	WACKER method
Water beading effect	WACKER method
Determination of the water absorption of gypsum- based material	DIN EN 520



Under the brand name ELASTOSIL®, WACKER offers a broad range of silicone elastomers' products.



In the new carpet lab, a WACKER expert is conducting a tuft bind strength test.

## SILICONE ELASTOMERS

The engineering silicones' lab is equipped to carry out developments for silicone elastomers. The main focus in the areas of application are insulator coatings, mold-making and baking trays. The lab has state-of-the-art mixing equip-

ment for developing low-viscosity silicone elastomers' formulations. It also houses a spray chamber, which is a unique facility for supporting local customers in the electrical industry within the Middle East and Africa region.

### Tests with Relevant Test Methods

Test Method	Standard
Shore A hardness	ASTM D2240 / type A
Shore OO hardness	ASTM D2240 / type OO
Dynamic viscosity	DIN EN ISO 3219
Baking tray coating with silicones	WACKER method
Heat-ageing for silicone elastomers	WACKER method
Mold-making for silicone elastomers	WACKER method
Skin-forming time	WACKER method
Spray applications RTV coatings	WACKER method

## ADHESIVES AND CARPETS

High quality, flexibility and reliability are standard for us. This is where our laboratory for adhesives and carpets in Dubai, which opened in 2017, sets in. The polymers' lab adopts the international standard to local needs and conditions. It provides technical support for formulations with vinyl acetate-ethylene (VAE) copolymer dispersions to meet the growing local demands of our customers in the carpet and adhesives' industries.

VAE dispersions of the VINNAPAS® brand are increasingly being used in place of traditional latexes as binders for bonding carpet backing, as well as for high-quality wood glue and water-based flooring adhesives. The lab is equipped with cutting-edge instrumentation and enables numerous tests on locally available raw materials under climatic and environmental conditions to meet regional requirements.

### Tests with Relevants Test Methods

Test Method	Standard
<b>For Adhesives</b>	
Delamination / peel strength	WACKER test method close to DIN EN 1372
Open time	WACKER test method
Heat resistance	WACKER test method
D3 / D4 test for wood glue	EN 204
Adhesion and peel strength with various difficult-to-bond substrates	WACKER test method
<b>For Carpets</b>	
Tuft bind strength in wet and dry conditions	ISO 4919
Delamination in wet and dry conditions	ISO 11857



## THE WACKER MYLAB IN SOUTH AFRICA

The construction industry in the Southern African Development Community (SADC) countries is growing rapidly. That is why we, at WACKER, identified a need to implement a laboratory closer to our official distributor in South Africa and to their customers. Our solution is the WACKER MyLab: our first mobile laboratory in South Africa. It was developed by WACKER in Germany and is operated by the WACKER MEA office.

### Find Regional Answers

MyLab is a unique offering in the African construction and paint market. Its high-tech testing facilities allow you to test construction materials in accordance with national and international standards. This helps to improve existing solutions and to develop novel ideas and applications.

Above all, MyLab's presence right here in Johannesburg makes it easier to find regional solutions which comply with the architectural tradition, natural resources and climate in the SADC (South Africa Development Community).

### A Fully-operational Laboratory

MyLab is a 40-foot, climate-controlled container that is fitted with testing equipment that creates a fully-operational laboratory, designed with the intention of offering local technical support to customers from the construction industry. WACKER's MyLab shares technical know-how, provides region-specific solutions and aims at improving the industry by supporting local and international standards, such as ISO and other prominent authority certifications.

### Ready for Testing

The high-tech machinery installed at this mobile laboratory enables us to cater for the varied facets of dry-mortar and paints and coatings. WACKER MyLab has all the necessary application tools and testing equipment required to evaluate customer samples and carry out sustained internal development work.

### Tests at MYLAB

#### For Paints (LDE):

- Scrub / washability
- Block resistance
- Hiding power / coverage
- Gloss measurement
- Easy to clean / paint stain resistance

#### For Construction (LBE):

- EN 12004 for tile adhesives
- EN 13888 for tile grouts
- EN 998 for plaster
- EN 13813 for SLCs
- ETAG 004 for thermal insulation

### Ensuring High Quality

In today's highly competitive market and varying consumer behaviors, quality remains of the utmost importance to MyLab. WACKER seeks to be a pioneer by enhancing and developing sustainable solutions for the construction industry in Africa.



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