

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 applications, changing customer expectations, growing competition or new governmental regulations, nearly nearly all industries are forced to continuously optimize their products and processes today. 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 applications' consulting.

Work with Seasoned Experts

The Dubai technical center is made up of highly specialized, applications-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 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 the close intermeshing of the sales and technical teams, while creating ideal conditions to provide 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

How to Find Us



www.wacker.com/mea



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



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.

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
Particle size distribution	All mortars	EN 1015-1
Density of fresh mortar	All mortars	EN 1015-6
Compressive & flexural strength	Tile grouts	EN 12808-3
Screed materials	Self-leveling	EN 13813
Tensile adhesion strength	Tile adhesives	EN 1348
Waterproofing systems	Sealing Slurries	EN 14891
Deformability	Tile adhesives	EN 12002
Flow test	Self-leveling	EN 12706
Slip resistance	Tile adhesives	EN 1308
Open time	Tile adhesives	EN 1346
Abrasion resistance	Tile grouts	EN 12808-2

Additional Tests

Test Method	Application	EN DIN
Consistency and plasticity of fresh mortar	All mortars	EN 1015-3
Air content of fresh mortar	All mortars	EN 1015-7
Density of mortar (cured)	All mortars	EN 1015-10
Compressive strength of mortar	All mortars	EN 1015-11
Flexural strength of mortar	All mortars	EN 1015-11
Adhesion bond strength of mortar	Masonry mortars	EN 1015-12
Water uptake of mortar	Masonry mortars	EN 1015-18
Water vapor permeability	Masonry mortars	EN 1015-19
Adhesion bond strength	Tile adhesives	EN 1348
Determination of water impermeability	All mortars	DIN 1048-5
Water retention of fresh mortar	All mortars	DIN 18555-7
Adhesion bond strength and impact resistance	ETICS	ETAG 004

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.

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)



Measuring the gloss development of interior paints





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

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

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

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
Dynamic viscosity	DIN EN ISO 3219
Spray application of RTV coatings	WACKER method
Shore A hardness	ISO 868
Heat-aging for silicone elastomers	ISO 188
Skin-forming time	WACKER method
Baking tray coating with silicones	WACKER method
Mold-making for silicone elastomers	WACKER method
Shore 00 hardness	ASTM 2240/ type 00

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



ADHESIVES AND CARPET

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, climatic and environmental conditions and regional requirements.

Tests with Relevants Test Methods	
Test Method	Standard
For Adhesives	
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
For Carpets	
Tuft bind strength in wet and dry conditions	ISO 4919
Delamination in wet and dry conditions	ISO 11857

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





WACKER

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