

WACKER

CREATING TOMORROW'S SOLUTIONS

GENIOSIL®

VINNAPAS®

CONSTRUCTION | WATERPROOFING |
SOUTH EAST ASIA

WATERPROOFING
SOLUTIONS FOR
SUSTAINABLE BUILDING

WATERPROOFING – THE KEY TO BUILDINGS OF LONG-LASTING QUALITY



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Water is a scarce resource which needs protection. On the other hand, it is a substantial threat to buildings. Whether in liquid or vapor form, water damages building materials, such as concrete, masonry, and natural stone. Waterproofing solutions from WACKER protect our resources and assets alike by keeping water in and out.

Typical Damage to Building Materials Caused by Water



Ordinary concrete is a porous material. When water or humidity penetrate, the reinforcement starts to corrode, causing the concrete to crack.



Ingressing water also transports salts and aggressive chemicals (e.g. from acid rain) into the wall, damaging the building's substance and ruining the facade.

Experts at Your Side

WACKER has been active in Southeast Asia since 1984. To help you be successful in your market, we provide technical support at our technical center in Singapore. With the WACKER ACADEMY in Singapore, Vietnam and Indonesia, you have the opportunity to learn more about leading chemistry and technologies, as well as their application and introduction to new markets.



WACKER – THE EXPERT FOR WATERPROOFING SOLUTIONS

With decades of experience in construction chemicals, WACKER offers you a unique portfolio to develop waterproofing products specific to your market and region:

- VINNAPAS® dispersible polymer powders for the formulation of one-component (1K) cementitious waterproofing membranes
- VINNAPAS® polymer dispersions for the formulation of two-component (2K) cementitious waterproofing membranes
- GENIOSIL® WP as binders for liquid, one-component (1K) waterproofing membranes



WATER TANK

VINNAPAS®

CRACKS IN WALLS

GENIOSIL®

SEWAGE DRAINAGE

VINNAPAS®

WALLS AND FLOORS IN BATHROOMS

VINNAPAS®

GENIOSIL®



VINNAPAS® – A PORTFOLIO TAILORED TO YOUR NEEDS

Cementitious waterproofing membranes are cement-based, polymer-modified products that secure long-lasting protection against water damage. With more than 75 years of experience, WACKER is a worldwide leading manufacturer of polymer dispersions and dispersible polymer powders.

Excellent Water Barrier

Cementitious waterproofing membranes modified with VINNAPAS® dispersions and dispersible polymer powders:

- Keep out water even under pressure
- Provide water vapor permeability
- Bridge cracks due to shrinkage or substrate setting
- Accommodate small movements in the substrate
- Show excellent adhesion to many different substrates

With a Wide Application Range

VINNAPAS® modified cementitious waterproofing membranes can be used in:

- Kitchens and bathrooms
- Balconies and terraces (as impermeable layer under tiles)
- Swimming pools
- Surface-protection systems for structural concrete
- Basement walls
- Water tanks (for drinking water; national regulations must be observed)
- Sewage drainage

Highly Efficient

VINNAPAS® modified waterproofing membranes need to be only a few millimeters thick to perform better than cement alone.

TYPICAL APPLICATIONS



Swimming pools and water tanks can be waterproofed with VINNAPAS® modified waterproofing membranes.



In wet areas, waterproofing membranes are mandatory to prevent damage to the underlying structures. Polymer-modified cementitious waterproofing membranes are simply applied underneath the tiles.



Water-bearing pipes and sewers can easily be rendered waterproof to prevent leakage and loss of water during transport.

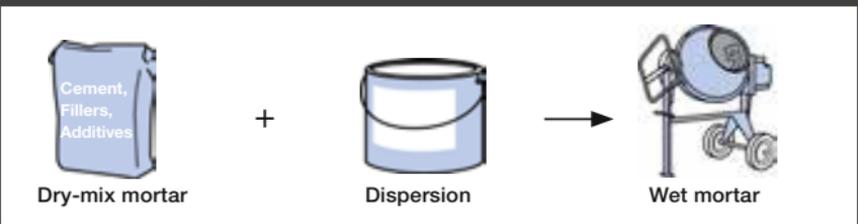
CEMENTITIOUS WATERPROOFING MEMBRANES

VINNAPAS® VAE polymer dispersions and dispersible polymer powders are suitable for the formulation of both flexible and rigid waterproofing membranes. Your production processes and the market demands will determine which one better suits your needs.

Cementitious Two-Component (2K) Waterproofing Membranes

VINNAPAS® polymer dispersions are used in two-component systems. Either a cementitious dry-mix mortar or ordinary cement is mixed with the VINNAPAS® dispersion on site. Alternatively, pasty components (dispersion, fillers and admixtures) are mixed with locally available Portland cement and water on site.

2-Component System



Cementitious One-Component (1K) Waterproofing Membranes

VINNAPAS® dispersible polymer powders are added to dry-mix mortar formulations at the mortar production site. This results in premixed, one-component systems that need only be mixed with water on site.

1-Component System



MAKE THE MOVE TO VAE!

A modern waterproofing membrane must combine high application performance with environmental advantages and a favorable cost-in-use. VINNAPAS® vinyl acetate-ethylene (VAE) polymer dispersions and dispersible polymer powders strike just the right balance.

Sustainability targets are an increasingly important topic in the construction industry. WACKER's VINNAPAS® VAE dispersions and dispersible polymer powders are low-VOC and produced without APEOs, thus enabling plasticizer-free formulations with high cement compatibility and an attractive cost/performance balance.

Reliable Barrier against Water

VINNAPAS® VAE polymer dispersions and dispersible polymer powders are highly compatible with cement and inorganic fillers. Benefits in the formulation of flexible two-component cementitious waterproofing membranes are:

- Good workability
- Resistant to positive water pressure at 1.5 bar
- High bonding strength
- High flexibility

Application Range

VINNAPAS® VAE-based waterproofing membranes are recommended for interior applications such as walls and floors in kitchens or bathrooms, or exterior applications such as balconies or swimming pools.

Easy Application

Waterproofing membranes can be applied using a roller, brush, trowel or airless spraying machine.



Flexible cementitious waterproofing membrane formulated with VINNAPAS® is capable of bridging cracks and can accommodate movements in the substrate.

WACKER – a Pioneer for Dispersible Polymer Powders

It was WACKER that, in 1957, succeeded in producing a polymeric binder powder for adding to dry-mix mortars. This achievement revolutionized the construction industry. For the first time, a

cementitious, polymer-modified, one-component system was available that dependably produced results of identical quality and only required water to be admixed on site.

GENIOSIL® WATERPROOFING LIQUID MEMBRANES

Waterproofing liquid membranes based on WACKER's GENIOSIL® WP silane-terminated polymers stand out in convenience and performance. They can be applied under unfavorable conditions, dry very fast and show properties comparable to those of polyurethane-based liquid waterproofing coatings – without the addition of solvents, plasticizers or tin catalysts.

Benefits for the Formulator

- Based on α -technology, therefore:
 - No tin catalysts needed
 - Long shelf-life
 - Non-hazardous substance
 - Great formulation latitude
- Low viscosity, therefore:
 - Easy handling and dosing
 - Fast compounding process in standard equipment (dissolver)
 - No special packaging needed
 - Formulations that comply with ETAG 005 (European Technical Approval Guideline) feasible
- 100% reactive material

Benefits for the User

- No mixing errors due to one-component (1K) system
- Solvent- and isocyanate-free
- Readily applied with roller or airless spraying equipment
- Processable under humid or cold conditions
- Primerless adhesion to many substrates
- Adhesion to damp surfaces
- Short drying times with early rain resistance
- No shrinkage
- Flexible from -40 °C to +80 °C
- Even cures under water



GENIOSIL® α -silane-terminated polymers have viscosities of 700 to 800 mPas. This allows the formulation of waterproofing liquid membranes with low viscosity that can even be sprayed on.

Hybrids are silane-crosslinking organic polymers that combine properties typical of both silicones and polyurethanes. They are highly versatile yet easy and safe to use, as they are isocyanate- and solvent-free and – in the case of the α -hybrids – don't need tin catalysts for curing.





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