WACKER is a globally-active chemical company with some 16,000 employees and annual sales of around €4.48 billion (2013). WACKER has a global network of 25 production sites, 21 technical competence centers and 52 sales offices.

GENIOSIL® XT 50 and GENIOSIL® XT 55 further complement WACKER’s portfolio of silane-curing binders. Both grades are based on silane-modified polyethers with a high density of crosslinkable silyl groups which cure to a tight-mesh network that is very strong but elastic. Adhesive layers and sealing membranes formulated with GENIOSIL® XT possess high strength. However, they are also highly ductile and will tear only when subjected to strong forces. Damaged material exhibits no tendency to tear propagation.

GENIOSIL® XT thus represents the first technically equivalent alternative to conventional polyurethane-based systems. By virtue of their properties, the new polymers are ideal for applications that repeatedly subject them to dynamic forces, such as vibrations in vehicles and washing machines. Up to now, applications of this kind were essentially the domain of isocyanate-curing polymer systems.

Furthermore, GENIOSIL® XT’s low viscosity makes it easy to process at low temperatures. The binders can be formulated
A transparent liquid waterproofing system based on the new silaneterminated polymer GENIOSIL® XT 50 available from WACKER can protect tiles against moisture and frost damage. Such polymers are both highly elastic, yet extremely tear resistant. They also display very good crackbridging properties (photo: Wacker Chemie AG).

with and without plasticizers or fillers, and blends can be produced in any color. The compounds can be formulated for adhesion to many conventional substrates, such as metals, glass, cement, glazed tiles, wood, polycarbonate, and polymethyl methacrylate. Priming is unnecessary. As the polymers are also miscible with all other GENIOSIL® silaneterminated polyethers, compounders can vary the properties over a wide range of formulations. Typical end products are industrial adhesives, liquid waterproofing systems, and coatings.

**WACKER SILICONES**

- Silicone fluids, emulsions, rubber and resins; silanes; pyrogenic silicas; thermoplastic silicone elastomers

**WACKER POLYMERS**

- Polyvinyl acetates and vinyl acetate copolymers in the form of dispersible polymer powders, dispersions, solid resins and solutions used as binders for construction chemicals, paints and coatings, adhesives, plasters, textiles and nonwovens, as well as for polymeric materials based on renewable resources

**WACKER BIOSOLUTIONS**

- Biotech products such as cyclodextrins, cysteine and biologics, as well as fine chemicals and PVAc solid resins

**WACKER POLYSILICON**

- Polysilicon for the semiconductor and photovoltaic industries

- **Siltronic**
  - Hyperpure silicon wafers and monocrystals for semiconductor components

**GENIOSIL® XT 50 for Liquid Waterproofing Systems**

GENIOSIL® XT 50 is an alpha-silane-terminated polymer and lends itself to the production of tin-free adhesives and crack-bridging liquid waterproofing systems. These can possess tensile strengths of up to 9 N/mm² and tear strengths of up to 50 N/mm² (measured in accordance with ASTM D 624 B-91). What is more, GENIOSIL® XT 50 can be formulated without fillers to make transparent, tin-free end products that have good mechanical properties.

GENIOSIL® XT 55 is a gamma-silane-terminated polyether. It can yield shear strengths of over 5 N/mm² combined with elongation at break of around 700 percent, the exact values depending on the formulation. Such formulations are also notable for their high tear strength and high elastic recovery. The polymer is therefore ideal for the production of high strength, yet extremely flexible industrial adhesives of the kind used, for example, in direct glazing of windshields in the automotive industry.

For further information, please contact:

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