Solutions for Adhesives
Evonik

• We are a global player with presence in local markets; proven, reliable product quality and supply security – on time and on target.

Face-to-Face Performance

• We have broad chemical platforms including nanosilicas, silicone specialties and organic surfactants including acetylenic chemistry.
• We are experts for interfacial phenomena, at the surface and within the matrix.
• We have specialized test facilities and laboratories in North America, Europe and Asia.
• You can count on our specialists for process knowledge, physico-chemical expertise, scientific studies and regulatory knowledge.
• Long-term relationships built on trust is the basis of our work.

Hybrid Adhesives & Sealants

Our silane-modified polymers are high quality binders for your hybrid adhesives & sealants. They allow to develop products addressing various applications with a wide range of mechanical properties without hazard labelling. We offer silane-terminated binder systems (Methanol-release) and silane-modified polymers with lateral cross-linking groups (Ethanol-release).

<table>
<thead>
<tr>
<th>Silane-modified polymers</th>
<th>Condensation curing silicones</th>
<th>Addition curing silicones</th>
<th>UV curing silicones</th>
<th>Reactive resin modifiers</th>
<th>Nanosilica concentrate</th>
<th>Dispersants/Deaerators</th>
</tr>
</thead>
</table>
| TEGOPAC® Polymer ST      | TEGPAC OH Polymer OH Crosslinker | TEGIMER® Polymer VS Catalysts Crosslinker VQM | TEGIMI® ALBIOX® TEGO® | NANOPOX® NANOCRYL® TEGO® | TEGO® Antifoam |}

Water-based Adhesives

Our portfolio includes wetting agents, antifoams, and emulsifiers for production of dispersions as well as additives to improve performance of adhesive formulations. The additives help to reduce foaming, improve wetting, modify rheology behavior or improve dispersing of fillers. Performance of adhesives for packaging, laminating, PSA or construction applications can be improved easily.

<table>
<thead>
<tr>
<th>Wetting agents</th>
<th>Dispersants</th>
<th>Emulsifiers</th>
<th>Deaerators</th>
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</table>
| REWOPOL® SURFYNYL® TEGOFLEX® | TEGO® Rheo | TEGO® SHO TEGO® SMQ | TEGOMER® TEGO® |}

Silicone Adhesives & Sealants

Our portfolio includes raw materials for condensation and addition curing silicones to address construction, electronic or medical applications. Our UV curing silicones help to produce tapes and labels with excellent release properties.

<table>
<thead>
<tr>
<th>TEGOMER® UV curing silicones</th>
<th>Dispersants/Deaerators</th>
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</table>
| reactive resin modifiers |}

Reactive Adhesives & Sealants

Our portfolio of additives for reactive adhesives & sealants (epoxies, PUs, acrylics) offers many possibilities to optimize performance of formulations. Improvement of fatigue properties, toughening of epoxides, deaeration of formulations or better dispersing of filler materials is possible.

| TEGO® Antifoam |

Binders & Additives

The left side of the overview shows our portfolio for reactive adhesive & sealant systems.

PROPERTIES BY DESIGN THROUGH INNOVATIVE POLYMERS:

- Our raw materials for silicones enable you to design properties of formulations (e.g. application behavior) and to improve properties of cured silicone adhesives & sealants.

The right side of the overview shows our additive portfolio for water-based & solvent-based systems.

The additives help you to optimize production processes and to improve performance of adhesives & sealants.

WITH OUR RANGE OF PRODUCTS, THE FOLLOWING ADVANTAGES CAN BE ACHIEVED:

- Reduction/elimination of foam or bubbles
- Eliminated microfoam while maintaining good compatibility
- Improved dynamic wetting behavior on difficult surfaces
- Facilitated higher application speed such as curtain coating applications
- Higher toughness and improved mechanical properties
- Viscosity and CLTE modification using reactive resin modifiers
- Improved dispersing of fillers
- Longer lifetimes

just to name a few.
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