Innovation isn’t just what we do. It’s who we are.
Tyzor® Application Guide

Dorf Ketal’s Tyzor® compounds are uncommonly versatile organic titanates and zirconates that are highly effective catalysts and crosslinkers, surface modifiers and reagents.

Dorf Ketal’s broad selection and superior technical support make it easy to put Tyzor® chemistry to work in your operation. Start here by matching one or more Tyzor® products with your application, and then call your Dorf Ketal representative for more information.

Extensive product information is available on our web site at www.dorfketal.com

Discover what Tyzor® can do for you.

Printing Inks
- Permanently bond NC/PU and NC/PA printing inks with polymer packaging and many other substrates, improving drying rates and adding resistance to heat, cold, moisture, solvents and abrasion.

Paints and Coatings
- Improve adhesion and dispersion by bonding inorganic fillers with organic resins, and add friction-modifying characteristics that help prevent splatter and runs in low-VOC structured paints.

Corrosion Protection
- Form thin, strong and flexible protective films, and bind sacrificial pigments such as zinc or aluminum to dissimilar metal substrates.

Adhesives
- Replace toxic materials such as di- and tri-valent metals with polymerizable esters, acrylates, allyl ether esters and polyurethanes.

Sealants
- Increase reaction rates, improve crosslinking and adhesion in silicone sealants and RTV-1 moisture-cure systems, or use as water scavengers to increase shelf life.

Polymer Synthesis
- High-yield catalysts for esterification, transesterification, Diels-Alder reaction and condensation reactions that increase reaction rates with minimal side-reactions.

Esterification
- High-yield catalysts that produce (meth)acrylic esters, polyester, plasticizers, various esters and polyurethanes along with high-quality recyclable alcohols and minimal olefinic byproducts.

Glass/Ceramic Coatings
- Increase surface hardness, promote coating adhesion, enhance resistance to corrosion and crazing, add coloring effects, improve heat and light reflectivity and add iridescence.

Oil and Gas Production
- Crosslinkers for hydraulic fracturing fluids, fluid-loss reducers for drilling fluids, diverting agents for enhanced oil recovery, and cross-linkers for secondary recovery via fluid injection.

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## Tyzor® Application Guide

### Water Sensitivity

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### Applications

#### Printing Inks

- **Solvent-based**: Flexographic, Gravure, Water-based

#### Paints and Coatings

- **Water-based**: Solvent-based

#### Corrosion Protection

- **Metal Parts**: Solvent-based, Water-based

#### Adhesives

- **Water-based**: Epoxy, PU, PVA
- **Solvent-based**: Epoxy, PU

#### Sealants

- **Silicone**

#### Polymer Synthesis

- **Polyesters**: PET, PBT, PPT, others
- **Polyolefin**
- **Poly carbonate**

#### Plasticizers

- **Acrylic esters**
- **Fatty acid esters**

#### Glass/Ceramic Coatings

- **Oil and Gas Production**

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– Improve drying rates and adding resistance to heat, cold, moisture, solvents and abrasion.

Paints and Coatings
– Improve adhesion and dispersion by bonding incompatible fillers with organic resins.
– Add new functionalities to create new applications that help prevent splatter and run in one- and two-component paints.

Corrosion Protection
– Form thin, strong and flexible protection films.
– Add novel metal-adhesion promoters.

Adhesives
– Replace toxic materials such as tin.
– While improving adhesion in polypropylene oxides, acrylates, alkylene oxides and polyurethanes.

Sealants
– Increase reaction rates, improve crosslinking and adhesion in silicone sealants and RTV moisture-cure systems.
– Or use as water scavengers to increase shelf life.

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– High-yield catalysts for esterification, transesterification, epoxidation, polymerization and condensation reactions that increase reaction rates with minimal side-reactions.

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