Tyzor® Catalysts for Polyols and Polymers
Product Guide

ABOUT DORF KETAL
Dorf Ketal Specialty Catalysts, LLC is the world’s leading supplier of organometallic catalysts for polymer synthesis and esterification. Our Tyzor® Activate™ catalyst technology is the market leader in the production of PET, PBT and polycarbonates.

Tyzor® products are high-yield catalysts used in polymer synthesis for esterification, transesterification, Ziegler-Natta polymerization and condensation reactions that increase reaction rates with minimal side-reactions.

Tyzor® 9000, ET, TE, TPT and TnBT can act as Lewis Acid Catalysts.

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<th>POLYMER OR POLYOL</th>
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| Polyester Polyol   | Tyzor® TE | Adipic acid / BDO systems  
- Produces clear, colorless polyols and fastest reaction rates.  
- Provides higher reaction rates at lower temperatures than other catalysts.  
- Provides good water stability and minimal hydrolysis reactions. |
| Phthalic acid / DEG systems | Tyzor® 9000 |  
- Produces clear, colorless polyols.  
- Provides fast reaction rates with higher rates at lower temperatures. |
| Phthalic acid / DEG systems | Tyzor® TE |  
- Produces clear, colorless polyols.  
- Provides fast reaction rates with higher rates at lower temperatures.  
- Provides good water stability and minimal hydrolysis reactions. |
| Adipic acid / BDO systems & Phthalic acid / DEG systems | Tyzor® TnBT |  
- Good reaction rates in polyester polyols.  
- Provides no water tolerance and is susceptible to hydrolysis that may increase maintenance downtime, slow reaction rates and produce haze.  
- Hydrolytically stable, fast-acting titanate catalyst.  
- Replaces organo-tin catalysts used to produce saturated polyester resins for coatings, including can coatings for food packaging. |
| Polyester Coatings | Tyzor® ACTivate™ 428 |  
- Good reaction rates in PBT and PTT.  
- Provides no water tolerance and is susceptible to hydrolysis that may increase maintenance downtime, slow reaction rates and produce haze. |
| PBT, PTT | Tyzor® TnBT |  
- Organotitanate products used in Ziegler-Natta polyolefin production processes.  
- Provide good selectivity for stereospecific polyolefin products. |
| Polycarbonate | Tyzor® ET |  
- High reaction rates in diethyl carbonate systems produce generally acceptable clarity and color.  
- Good overall reaction-rate performance and excellent clarity and color. |
| Tyzor® TPT |  
- Excellent for bottle and film resins.  
- Hydrolytically stable titanate catalyst.  
- Produces high reaction rates, excellent clarity and low color.  
- Economic benefits for producer and converters. |
| Tyzor® ACTivate™ 422 |  
- Excellent for specialty film resins.  
- Hydrolytically stable titanate catalyst.  
- Produces high reaction rates, excellent clarity and low color.  
- Low alkali metal for quality films and higher clarity. |

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