



TYTAN Titanates



Catalysts

Borica



TYTAN™ Catalysts for the Esterification, Transesterification and Acrylate Production

TYTAN™, manufactured by Borica Co., Ltd. from Taiwan, is the leading range of Organo-Titanate and Organo-Zirconate based catalysts. With its roots in the ICI tradition, Borica is committed to providing the chemical industry with a complete range of high quality catalysts, good service and competitive prices. Our catalysts are supplied to the world's manufacturers of:

Acrylates and Methacrylates

TYTAN™ titanates increase alcohol conversion and avoid undesirable side products.

Plasticizers such as DOP, DINP, DIDP, DOA, DINA, TOTM

TYTAN™ titanates can increase production of phthalates, adipates and trimellitates by up to 50% vs. conventional acid systems.

Compared with tin- and acid-based catalysts, the TYTAN™ range of products offers cost and environmental benefits resulting from:

- Low cycle time
- Low odor and low color due to better reaction selectivity
- Easy removal of catalyst through hydrolysis and lower filtration time
- Easy recycling of excessive ester or alcohol
- No heavy metals, omission of product washing and very low COD to production effluent
- Increased thermal stability

TYTAN™ range for Plasticisers and Acrylates

Product Name	Identification	Suitability	Benefits
TYTAN™ TNBZ	Tetra n-Butyl Zirconate CAS: 1071-76-7 EC: 213-995-3	<ul style="list-style-type: none"> ▪ Polyolefin, Ziegler alcohol ▪ Polycondensation 	<ul style="list-style-type: none"> ▪ Higher efficiency ▪ Yellowing free
TYTAN™ TNPZ	Tetra n-Propyl Zirconate CAS: 23519-77-9 EC: 245-711-9	<ul style="list-style-type: none"> ▪ Polyolefin ▪ Polycondensation 	<ul style="list-style-type: none"> ▪ Higher efficiency ▪ Yellowing free
TYTAN™ ET	Tetra Ethyl Titanate CAS: 3087-36-3 EC: 221-410-8	<ul style="list-style-type: none"> ▪ (Meth)Acrylic ester ▪ Polycondensation 	<ul style="list-style-type: none"> ▪ High Ti-content and reactivity ▪ Higher efficiency
TYTAN™ TIPT	Tetra iso-Propyl Titanate CAS: 546-68-9 EC: 208-909-6	<ul style="list-style-type: none"> ▪ Plasticizer, Alpha olefin, Polyolefin, Ziegler alcohol ▪ Polycondensation 	<ul style="list-style-type: none"> ▪ High Ti-content and reactivity ▪ Higher efficiency
TYTAN™ BIP	Propylbutyl Titanate CAS: 68955-22-6 EC: 273-260-8	<ul style="list-style-type: none"> ▪ Plasticizer ▪ Fatty ester ▪ Fatty alcohol 	<ul style="list-style-type: none"> ▪ High Ti-content and reactivity ▪ Higher efficiency ▪ Lower freezing point
TYTAN™ TNBT TYTAN™ TBT	Tetra n-Butyl Titanate CAS: 5593-70-4 EC: 227-006-8	<ul style="list-style-type: none"> ▪ Plasticizer, Alpha olefin, Polyolefin, Ziegler alcohol ▪ Polycondensation 	<ul style="list-style-type: none"> ▪ High Ti-content and reactivity ▪ Higher efficiency ▪ Lower freezing point
TYTAN™ TNPT	Tetra n-Propyl Titanate CAS: 3087-37-4 EC: 221-411-3	<ul style="list-style-type: none"> ▪ Polyolefin ▪ Ziegler alcohol 	<ul style="list-style-type: none"> ▪ High Ti-content and reactivity ▪ Higher efficiency ▪ Lower freezing point
TYTAN™ EHT	Tetra 2-Ethylhexyl Titanate CAS: 1070-10-6 EC: 213-969-1	<ul style="list-style-type: none"> ▪ Plasticizer ▪ Methacrylic ester 	<ul style="list-style-type: none"> ▪ Reduced moisture sensitivity ▪ Alcohol matched to end product
TYTAN™ AQ33	Aqueous Titanium Chelate CAS: 65104-06-5 EC: 265-409-0	<ul style="list-style-type: none"> ▪ Esterification of polyester like PET, PPT and PBT 	<ul style="list-style-type: none"> ▪ Water soluble ▪ Higher efficiency

For more information contact Borica Co., Ltd.
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