# Tyzor® EHTAA

## Organic Titanate

**DESCRIPTION**

Tyzor® EHTAA is a titanium chelate with acetylacetonate as chelating agent, 66 % active content in 2-ethylhexanol. Tyzor® EHTAA is a clear, amber to orange slightly viscous liquid. It is soluble in water and will remain soluble for a short period of time.

**FUNCTIONALITY**

Tyzor® EHTAA can effect adhesion promotion, cross-linking of various functional polymers, or can be used to form polymeric titanium dioxide layers as a binder or coating.

Tyzor® EHTAA can also act as a Lewis acid catalyst in processes such as esterification, transesterification, condensation, addition reaction etc.

**APPLICATIONS**

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|---|---|
| Printing Inks | Tyzor® EHTAA is excellent for cross-linking and adhesion promotion in solvent based printing inks (e.g. based on nitrocellulose). Benefits of Tyzor® EHTAA include improved drying rate, increased solvent resistance, heat resistance, and adhesion to various substrates. |
| Coatings | Glass, metals, fillers, and pigments can be treated with Tyzor® EHTAA to give increased surface hardness, improved adhesion, scratch resistance, optical effects, heat and light reflection, iridescence, and corrosion resistance. |
| Paint Additive | Tyzor® EHTAA can be used as an additive in paints to cross-link functional polymers or binders, promote adhesion, or act as a binder itself. |
| $TiO_2$ Pigment and Films | Micro- or nano-scale $TiO_2$ pigments can be formed from Tyzor® EHTAA. It can also be used to create a polymeric $TiO_2$ film on surfaces via pyrolytic or hydrolytic e.g. sol-gel) processes. |
| Reaction Catalyst | Tyzor® EHTAA can be used as a catalyst for esterification, transesterification, condensation, and addition reactions. Typical reaction products include, (meth)acrylic esters, polyester**,** plasticizer, various esters, polyurethanes, etc. The benefits of using Tyzor® EHTAA include elimination of by-products, increased yield, easy work-up, and low catalyst concentration. |

**HOW TO USE**

Tyzor® EHTAA is usually formulated with the other ingredients in catalysis, cross-linking, paint, or printing ink applications. It is often added as the last ingredient to prevent undesired pre-reactions within the system. For adhesion promotion or surface modification applications, Tyzor® EHTAA may also be applied as a primer from dilute solution.

In coating applications, thin, polymeric $TiO_2$ layers may be formed by thermal or hydrolytic processes.

In sol-gel applications, total or partial hydrolysis of Tyzor® EHTAA, typically in combination with other metal alkoxides, affords metal oxide systems for use as binder or coating.

| TYPICAL PROPERTIES | PROPERTY | TYPICAL VALUE |
|---|---|---|
| | TiO2 Content | ca. 10.6 % |
| | Ti Content | ca. 6.3 % |
| | Active Content | ca. 66 % |
| | Color | Yellow to Amber |
| | Solvent | 2-Ethylhexanol |
| | Specific Gravity (25°C) | ca. 0.94 g/mL |
| | Boiling Point | ca. 185 °C (solvent) |
| | Flash Point | ca. 54 °C |
| | Solubility in Solvents | Miscible in most organic solvents |
| | Solubility in Water | Partly Miscible |

**GLOBAL REGISTRATION INFORMATION** Please refer to "Tyzor Global Registration Information" Bulletin

**SAFETY and HANDLING** For specific safety, handling and toxicity information, please refer to the current Material Safety Data Sheet.

**TYPICAL SHELF LIFE** 2 years



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