

DORF**Tyzor® 217****Organic Titanate****DESCRIPTION**

Tyzor® 217 is a water-based zirconium chelate that is stable in water near neutral pH, making it an excellent choice for use in aqueous systems.

FUNCTIONALITY

Tyzor® 217 can react with a variety of nucleophilic species such as -OH and -COOH groups. It is an effective crosslinking agent for carbohydrates (e.g., cellulose, starch and guar) and other functionalized polymers (e.g., polyvinyl alcohol). It is also effective as a surface modifier and adhesion promoter, enhancing paper, glass, metal, pigments and other materials having oxidized surfaces.

APPLICATIONS

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| Oil well fracturing fluids | Tyzor® 217 is an effective cross-linking agent for dispersions of guar and its derivatives to form high-viscosity aqueous gels used in oil well fracturing applications. |
| Paints and coatings | Tyzor® 217 cross-links the pigments and binders in waterborne paints (e.g., acrylic paints) and printing inks. Glass, metals, fillers and pigments can be treated with Tyzor® 217 to give adhesion promotion; to increase compatibility; and to modify physical properties. Tyzor® 217 has the added benefits of no VOC content and low toxicity. |
| Paper and nonwovens | Tyzor® 217 can be used to modify the surface of paper and synthetic nonwovens to increase hardness and decrease hydrophilicity. |

HOW TO USE

Tyzor® 217 is usually formulated with other ingredients in cross-linking, paint and some coating applications. The zirconate is usually added as the last ingredient to prevent undesired pre-reactions. The time for gel formation depends on several factors, including: the formulation ingredients; type of polymer; temperature; pH; brine strength; and zirconate concentration.

For adhesion promotion or surface modification applications, Tyzor® 217 can be applied as a primer from dilute solution.

TYPICAL PROPERTIES	PROPERTY	TYPICAL VALUE
	Zr Content	5.4 %
	Color	Pale yellow
	Solvent	Water
	Specific Gravity (25°C)	1.2 g/mL
	Freezing Point	0 C
	Boiling Point	100 C
	Flash Point	None
	Solubility in Water	Fully 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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Issued July 2010