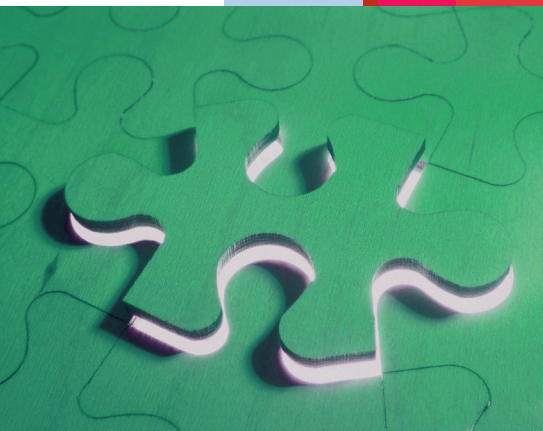


# DuPont™ Tyzor®

ORGANIC ZIRCONATES

## Product Information for Tyzor® 217



### Description

DuPont™ Tyzor® 217 is an aqueous solution of zirconium lactate, sodium salt. The performance of this colorless to pale yellow, slightly hazy solution is not affected by freezing.

### Typical Properties\* of Tyzor® 217

Property	Value	Unit
Zr Content	ca. 5.4	%
Color	Pale Yellow	
Solvent	Water	
Specific Gravity (25°C)	ca. 1.2	g/mL
Freezing Point	ca. 0	°C
Boiling Point	ca. 100 (water)	°C
Flash Point	None	
Solubility in Water	Fully Miscible	

\*This table gives typical properties. DuPont does not make any expressed or implied warranty that this product will continue to have these typical properties.

### Functionality

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.

Tyzor® 217 can react with a variety of nucleophilic species such as -OH and -COOH groups. It is an effective cross-linking 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.



*The miracles of science™*

## Applications

### Oil well fracturing fluids

DuPont™ 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.

## 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.

### Put Tyzor® to Work for You

The broad range of Tyzor® organic titanates and zirconates allows you to select the optimum grade to meet your specific needs, enabling you to produce superior quality products for a wide variety of applications and market segments.

And, with warehouses in every region and an integrated global network of highly trained sales and technical service professionals available to assist you, it is easy and convenient to put Tyzor® to work in your application anywhere in the world.

## Contact Information

For more information about the extensive line of DuPont™ Tyzor® organic titanates and zirconates, please contact:

### North America

Wilmington, Delaware  
Pricing and Orders: 800-441-9508  
Technical Support: 800-255-4596  
Fax: 302-992-2695

### South America

São Paulo, Brazil  
Phone: 55 11 4166-8337  
Fax: 55 11 4166-8849

### Europe, Middle East, Africa

Antwerp, Belgium  
Phone: +32 (3) 730-2282  
Fax: +32 (3) 730-2390

### Asia Pacific

Taipei, Taiwan  
Phone: 886-2-2514-4451

**Email: [tyzor@usa.dupont.com](mailto:tyzor@usa.dupont.com)**

**Web site: [www.tyzor.dupont.com](http://www.tyzor.dupont.com)**

The information set forth herein is furnished free of charge and is based on technical data that DuPont believes to be reliable. It is intended for use by persons having technical skill and at their own discretion and risk. DuPont makes no warranties, expressed or implied, and assumes no liability in connection with any use of this information. Nothing herein is to be taken as a license to operate under or a recommendation to infringe any patents.

