



innovative chemical technologies, inc.

OVERVIEW

React-Rite ZDA is a free-flowing 100% active difunctional metallic diacrylate monomer that can be readily compounded with a variety of elastomers. With exceptional high temperature stability and fluid-resistance, React-Rite ZDA cured elastomer systems exhibit high tensile and tear strength, and excellent heat-aged properties.

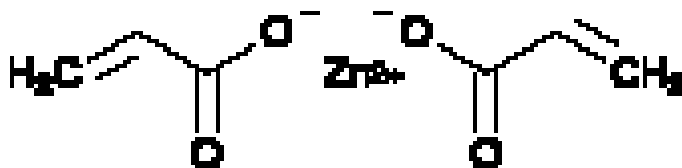
When used in conjunction with sulfur cured systems, particularly with React-Rite MBT (mercaptobenzothiazole), React-Rite ZDA functions as an activator for sulfur vulcanization, providing higher states of cure than zinc oxide at equivalent molar concentrations, while additionally improving modulus and reversion.

React-Rite ZDA, when used as a metal adhesion promoter, imparts strong rubber-to-metal bonding for a variety of elastomers including silicone rubber, EVA, EPDM, natural rubber and Hypalon, resulting in strong adhesive bonds at low coagent levels.

React-Rite ZDA is sparingly water soluble (25g/L), exhibits a very low potential for bioaccumulation in aquatic organisms, and does not exhibit significant toxicity at exposures far in excess of those that might occur from accidental ingestion or contact, and is readily biodegradable.

APPLICATIONS AND USE

- Crosslinking agent used to improve strength and abrasion resistance in peroxide cure systems.
- Curing agent for epoxy functional compositions for reduced shrinkage and compatibility with fillers and additives.
- Curing agent for promoting rubber-to-metal adhesion.
- Typical use rate 5-20 phr.
- Very low order of toxicity and irritation.
- Typical end-use products:
 - conveyor belts
 - golf balls
 - shoe bottoms
 - sealants
 - corrosion resistant coatings
 - tapes, treatments and wraps
 - films and paints
 - structural composites
 - adhesives



SPECIALTY MONOMERS

React-Rite™ ZDA Zinc diacrylate (ZDA)

React-Rite™ ZDA

Zinc diacrylate (ZDA)

TECHNICAL INFORMATION

Acrylate or methacrylate metal salts are added to rubber compositions prior to curing to impart to the cured product qualities such as increased stiffness, hardness and abrasion resistance. Acrylate or methacrylate metal salts are used in compositions with any elastomer that can be polymerized with a peroxide initiator. The most commonly used salts are zinc diacrylate (React-Rite ZDA) and zinc dimethacrylate (React-Rite ZDMA).

Cured rubber compositions comprising acrylate or methacrylate metal salts are suitable for use in applications where a particularly stiff and abrasion resistant rubber is required. Typical end uses include conveyor belts, shoe bottoms, hard roll covers and golf balls. For use in conveyor belts, a typical rubber composition comprises hydrogenated acrylonitrile-butadiene rubber (NBR) as the main elastomer component, zinc diacrylate, and a plasticizer. A typical composition for golf balls comprises polybutadiene as the elastomer and zinc diacrylate.

The use of zinc diacrylate and zinc dimethacrylate are useful curing agents for systems of polybutadiene, melamine, isocyanates and epoxy functional monomers. Cured and cross-linked systems are characterized by reduced shrinkage and exhibit compatibility with a wide range of fillers. When used in place of conventional curing agents in epoxy functional coatings, improvements in shelf life and increased corrosion resistance can be obtained. Applications include automotive sealants, corrosion resistant coatings, adhesives, pipeline treatments and wraps, films and paints and structural composites.



TYPICAL PROPERTIES

PROPERTY	VALUE
Physical form	Powder
Color	White to off-white
Heat Loss (5g/100°C/30 min.)*, %	0.3 max.
Moisture*, %	0.2 max.
Ash*, %	35.0-37.5
Methanol Insolubles*, %	7.0-9.0
Density (25°C)*, Mg/m ³	1.59-1.65
Particle Size (80 mesh)	100% min.
Particle Size (250 mesh)	95% min.
* Certified Property	

PACKAGING & HANDLING

Handle React-Rite products with care. Use in well ventilated area. Avoid contact with eyes, nose or prolonged skin contact. Gloves, protective clothing and safety goggles should be worn when handling React-Rite products. Wash thoroughly after handling material. Refer to the Safety Data Sheet for specific information on the safe use, handling, storage and disposal, and transportation of this product.

Standard container for React-Rite ZDA is 1750 lb. net weight FIBC.

Innovative Chemical Technologies, Inc.
103 Walnut Grove Road, Cartersville, GA
30120

An ICT Industries Inc. company 

ID# 20200709 • This information relates only to the specific material referred to herein and not to its use in combination with any other material or in any process, unless explicitly stated herein. Such information is, to the best of our knowledge and belief, accurate and reliable as of the date compiled; however, no warranty, guarantee or other representation is made as to its accuracy, reliability, or completeness, or regarding any liabilities arising from others' intellectual property rights.