

## Thixon® 516

### Primary Use:

Thixon 516 is a solvent-based vulcanizing covercoat adhesive used with Thixon P-6-3 or Thixon P-11 adhesive primers for bonding NR, BR, IR, CSM, SBR, CR, IIR, HNBR, XNBR, NBR and EPDM compounds to metal during vulcanization.

Thixon 516 is also a splice adhesive for bonding cured and uncured rubber compounds to themselves and other elastomers.

Thixon 516 is also an intermediate adhesive used with Thixon 913 tie coat adhesive and Thixon P-11 adhesive primer for open steam or autoclave curing of tank linings.

### \*Typical Physical Properties

Property		ASTM Method
Color	Black	
Viscosity, #3 G.E. Zahn cup	30 seconds	D-1084-88-D
Non-volatile solids by weight	14%	D-2369 †
Spec. Gravity	0.92	D-1475
Wgt per Gal	7.6 lb	D-1475
Flash Point (Seta)	40°F	
Cure temp range	212-370°F	
Sugg. film thickness	0.5 -1.0 mil	
Shelf life unopened	18 months	

† Modified to internal Rohm and Haas method

\*These properties are typical and are not to be used for specification purposes.

### Environmental Resistance:

Properly prepared bonds will resist salt fog, oil, and water immersion.

### Metal Surface Preparation:

Properly preparing the metal surface is the most important factor in obtaining consistent, high quality bonds. Remove contaminants by alkaline cleaning or solvent degreasing. Then gritblast the metal surfaces with #40 or #50 grit and solvent degrease them. You can also pretreat the metal surfaces with iron or zinc phosphate, chromate conversion, and acid or alkaline cleaning procedures.

Keep the pretreatment solution clean. Often, poor bonds are traced to using contaminated treatment solutions. Follow the manufacturer's treatment instructions carefully. **Change the cleaning solution when it is contaminated.** Keep the cleaning solutions at the concentration and temperature specified. Likewise, keep the metal immersed for the length of time specified.

### Mixing and Diluting:

Diluents: Use toluene or xylene.

Thoroughly mix Thixon 516 with a high speed propeller-type agitator before using. Slowly add the diluent to the adhesive while constantly agitating. Continue to agitate while spraying or dipping to keep the dispersed solids from settling to the bottom of the tank. The lower the viscosity, the more the solids tend to settle.

### Applying the Adhesive

**Brush** - For brush applications, use Thixon 516 undiluted. To obtain the required film thickness, brush on a heavy wet film. Do not brush excessively.

**Dip** - To obtain a film thickness of 0.5 mil, dilute 3 parts Thixon 516 with 1 part toluene.

**Conventional Air Spray** - For spray applications, dilute 2 parts Thixon 516 with 1 part diluent to obtain a viscosity of 23-26 seconds (#2 Zahn Cup).

Equipment	Binks	DeVilbiss
Gun Models	62 or 18	JGA 502 or MBC 510
Fluid Nozzles	63A - 0.040" 63B - 0.046" 63C - 0.052"	FX - 0.042" FF - 0.055"
Air Caps	53PB or 66SD	704 or 777

Pressure tanks must be equipped with an agitator and be ASME rated for industrial use. Flow rate should be 300-350 cc per minute. Atomization pressure should be 50 psi.

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For cleaning your spray equipment, use one of the recommended diluents.

#### **Temperature Viscosity Chart**

Temperature	#2 Zahn Cup
50°F	45 seconds
60°F	40 seconds
70°F	37 seconds
80°F	33 seconds
90°F	30 seconds
100°F	27 seconds

#### **Drying the Film:**

Thoroughly dry the film of Thixon 516 before continuing, approximately 30 minutes at 60°-80°F. At lower temperatures, dry longer. The drying time can be shortened by force drying approximately 5 minutes at 180°F.

#### **Theoretical Coverage:**

One gallon of Thixon 516 applied at 0.5 mil dry film thickness will cover approximately 331 square feet.

#### **Dry Film Stability:**

Thixon 516 exhibits excellent dry film stability. You can store inserts coated with Thixon 516 for several months if they are protected from all contaminants. Do not touch the coated parts with bare hands.

#### **Molding and Curing**

Thixon 516 can be used with all common molding and curing methods. Use a cure temperature of 212-370°F. The coated inserts can be prebaked for 10 minutes at 320°F during mold loading without affecting bond quality. Thixon 516 films show no tendency to sweep during transfer and injection molding.

#### **Toxicity and Safety Information**

***Read the Material Safety Data Sheet before using this material.*** Keep flammable material away from heat, sparks and open flame. When pouring flammable material, ground both containers to avoid static discharge (sparking) which could ignite solvents. Do not allow free fall of more than a few inches which could also generate static charges.

Breathing vapors for a prolonged period of time is harmful. Ventilation systems in compliance with applicable local, state, and federal regulations must be used. Repeated contact may cause skin irritation. This material may be harmful or fatal if swallowed. If swallowed, induce vomiting and call a physician.

#### **Storage & Handling Information**

***Read the Material Safety Data Sheet, Section 7, for the safe handling and storage of the product.*** Store in a cool, dry, well-ventilated area away from heat, ignition sources and direct sunlight. Keep containers tightly closed. Containers should be supported and grounded before opening, dispensing, mixing, pouring and emptying.

For questions regarding the handling of empty containers or dry film with respect to the hazardous waste regulations, we suggest you contact the RCRA Hotline sponsored by US EPA at 1-800-424-9346 or your local/state environmental agencies.

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The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results and assume no liability for damages incurred by following these suggestions. Nothing contained herein is to be construed as a recommendation for use in violation of any patents or of applicable laws or regulations.

Customer Service and Technical Assistance 1-800-348-8846 (West Alexandria, Ohio USA)