

# technical information

#1316



CRICS<sup>SM</sup>

Ceramic Reflective Insulating Coating Systems

## THERMCOTE/XL-INSULATOR™

WATERBORNE ACRYLIC POLYMER WITH SILICON MICROSPHERES



### PRODUCT DESCRIPTION

**THERMCOTE/XL-Insulator™** is a liquid insulation, consisting of a mixture of various silicon and ceramic beads blended into a high quality acrylic polymer. **THERMCOTE/XL-Insulator™** is designed to provide both thermal and acoustical insulation for a variety of industrial applications, providing an effective, inexpensive alternative to the high cost of typical insulation systems. Due to its excellent and reflectivity and emissivity, excels at insulating structures and equipment from radiant energy gain. 99% of the radiant energy that comes in contact with our product is either reflected or re-emitted; meaning only 1% of the radiant energy is absorbed. It performs very well at protecting personnel from burn hazards on hot or cold structures and equipment. Because it physically adheres to the surface, it significantly reduces corrosion and rust formation. Extremely lightweight and pliable, therefore, it expands and contracts with the surface to which it is applied. The use of **THERMCOTE/XL-Insulator™**, in place of other insulation, reduces both the space and weight for any given structure or piece of equipment.

### PRODUCT USES

- Pipe and Valve Insulation
- Tank Insulation
- Roof Coating
- Interior and Exterior Wall Insulation
- Interior and Exterior Ducting

### PRODUCT ADVANTAGES

- Excellent radiant reflectivity and emissivity properties
- Significantly reduces radiant energy gain
- Low thermal conductivity & good conductive insulation properties
- Very good burn safety characteristics & excellent for personnel protection
- Light weight – less weight than other insulations
- Good adhesion & bonds well to a variety of substrates
- Moisture resistant & helps prevent corrosion and rust formation
- Easy application & installs in much less time than other insulations
- Reduces or eliminates condensation

### SURFACE PREPARATION

Clean the surface to be coated with a pressure washer, leaving the substrate free of solvents, grease, dirt or dust. If the surface has been cleaned with a solvent, make sure that all solvent oils and protective compounds have been removed from the surface. Once cleaned, make sure the surface to be coated is completely dry. Although primer is not required for most surfaces, if rust or other conditions persist after cleaning we would recommend a high temperature inorganic zinc primer that can withstand the temperature of the surface to be coated. Some surfaces, such as glossy paint, or glaze, can be sanded for optimal adhesion.

### APPLICATION PROCEDURE

Power mix contents of container using a mud paddle at 300 rpm or less for 3-5 minutes, making sure to blend in all solids on top of container. Surface temperature needs to be at a minimum 50°F/10°C, Maximum 300°F/150°C. Coating will not dry below 50°F/10°C. Prior to applying to substrates at temperatures greater than 150°F/68°C, contact ProTek-USA. Apply **THERMCOTE/XL-Insulator™** on a dry, clean, substrate which is free from oil, grease, was, dirt, rust or corrosion. Use airless sprayer with 3000 PSI, 1.25 GPM, and 28:1 ratio with a .021 tip size. An AR-1 Spray Gun using shop air may be used for small applications. Allow products to completely dry between coats. Dry time is 12 hours under room temperature conditions. Elevating temperature of substrate will accelerate recoat time. Brush may be used for touch up, but is not recommended for full application, except for under 500 ft. For roller application for small projects contact ProTek-USA, LLC to obtain special roller.

**REFLECTIVITY:** ..... 83%+ white (slightly less when tinted)  
**EMISSIVITY:** .....94%+ white (in light earth tones or pastels)  
**V.O.C.** ..... 0.15lbs/gal.(black) – 0.10lbs/gal.(white)  
**CROSS HATCH ADHESION (ASTM 3359)** ..... 100% passed  
**FLAME SPREAD (ASTM E84-98)** ..... 25  
**SMOKE DEVELOPED (ASTM E84-98)** .....45  
**ACCELERATED AGING (ASTM G53)** no primer-discoloration @200 hrs  
**BROOKFIELD VISCOSITY, #3 SPINDLE, 30 RPM:** ...3564 centipoises  
**SPECIFIC HEAT (23°C) (ASTM C351)** ..... 1.1120 W·s/gm·K  
**THERMAL DIFFUSIVITY (23°C) (ASTM 1461)**..... 0.00239 cm /sec  
**THERMAL CONDUCTIVITY:** .....(23°C) 0.00097 W/cm·K/0.0563 Btu/hr·ft·°F  
**SERVICE TEMPERATURE-CONTINUOUS:** -40 F/-40 C :500 F/260 C  
**MAXIMUM SURGE:** .....500 F/260 C  
**FINISH:** .....Flat  
**COLOR:** .....White & Black  
**FIRE Rating:** Class “A” as per ASTM E84-01, NFPA 101Life Safety Code  
**RECOMMENDED DRY FILM THICKNESS:**  
15-200 mils (0.4mm-5.0mm; 15-30 mils (0.4-0.8mm) per coat,  
multiple coats required to obtain greater thicknesses. Thickness  
varies with application.  
**DRY TIME (@ 75°F):**  
**TO TOUCH:** .....3 Hours  
**TO RECOAT:**.....12 Hours  
**FULL CURE:** .....5 to 7 Days  
**SPRAY APPLICATION:** ..... 60sq. ft/gallon @ 15 mils (0.4mm)  
**VEHICLE TYPE:** ..... Acrylic Polymer  
**SOLIDS by VOLUME:** .....80.5%  
**GALLON WEIGHT:** ..... 5.6lbs. +/- 0.3lbs  
**STORAGE TEMP:** ..... Min. 40°F/5°C, Max. 80°F/26°C  
**SHELF LIFE:** ..... 12 months at cool temp.  
**SIZES:** ..... 1-Gal, 5-Gal, 55-Gal

### APPROXIMATE COVERAGE

Theoretical Coverage: 60 sq.ft./gallon @ 15 mils (0.4 mm) per coat

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