

## Product Data Sheet

PRODUCT: **U-Coat 301 Insulating Coating**



### Properties of U-COAT 301 Insulating Coating

**Percent Solids by Volume:** (+/-) 83% Wet

**Weight:** 5.25 lb/gal

**Shipping Weight per 5gal pail:** 28.5 lbs

**Dry Weight:**

0.8 oz/ft<sup>2</sup> @ 20 mils

4.0 oz/ft<sup>2</sup> @ 100 mils

**Theoretical Coverage @ 20 mils:**

66.6 ft<sup>2</sup>/gallon

**Expected Coverage:**

Please see application guide or contact technical rep.

**VOC Content:**

0.0099 expressed per EPA Method 24 (weight fraction)

**Thermal Value:**

$k(eqv) = 0.23 \text{ (Btu}\cdot\text{in)/(hr}\cdot\text{ft}^2\cdot\text{°F)}$

The operating temperature range for **U-COAT 301 Insulating Coating** can be from -80°F (-62°C) to 350°F (+177°C). It can be applied to temperatures ranging from 45°F to 350°F. On extremely warm to hot surfaces, beginning coats must be thin to avoid blistering

### DESCRIPTION

**U-COAT 301 Insulating Coating** is a general-purpose insulation which comes in liquid form.

**U-COAT 301 Insulating Coating** liquid ceramic insulation is a thin film that performs extremely well on piping, tanks, air and heat

ductwork, exposed water pipes, oxygen lines, steam lines, chilled lines, cryogenics, vehicle/transpiration, and many more uses. **U-COAT 301 Insulating Coating** provides an inexpensive alternative to high cost industrial insulation.

Because it adheres to the surface that it is insulating, it significantly reduces (CUI) corrosion and rust formations under conventional insulations.

### Make up

**U-COAT 301 Insulating Coating** is a complete mixture of various hollow silica and ceramic beads immersed in a high-quality latex base with acrylic binders. This combination of materials makes the product extremely light weight and pliable, therefore, it expands and contracts with the surface to which it is applied.

**U-COAT 301 Insulating Coating** can be tinted virtually any medium to pastel color.

### Benefits of U-COAT 301 Insulating Coating

- Curbs Corrosion Under Insulation (CUI) by adhering directly to the surface in which it is insulating.
- Able to insulate using a thin coating compared to traditional insulations.
- Does not require jacketing.
- Easily repaired.
- Ease of inspection.
- Can be applied on surfaces up to 350°F without disruption of operations.
- Does not absorb moisture or liquids
- Does not harbor bacteria or pests.
- Eliminates waste
- Ease of Application

### APPLICATION

**Surface Preparation:**

Apply **U-COAT 301 Insulating Coating** on any clean, dry substrate that is free from oil, grease, wax, or dirt (assuming the existing coating or surface is stable). A minimum of

SP-2/SP-3 or equivalent. A sufficient amount of primer on all surfaces prone to rust and to prevent bleed through is recommended.

### Mixing

A rectangular sheet rock mud paddle is needed to blend the product.

### Equipment

Spray equipment requirement: Pump capable of producing 2 to 3 gpm at 3000psi (28:1 ratio airless sprayer or larger)

Our air assisted "**U-COAT GUN**" is designed for small or hard to reach applications. This gun operated on 80 psi air supply.

A brush or roller may be used and is generally recommended for small areas. The brush or roller should be dampened prior to use. This will allow the product to release. The first coat will be rough in texture. This will allow subsequent coats to grab and release. Subsequent coats may be smoothed by pulling the product in one direction with a damp brush or roller.

### Application Conditions:

Surface temperature should 45°F and rising.

Product should be applied in 20 mil coats, allowing the product to dry to the touch prior to successive coats. Total cure time is 24 hours under normal conditions.

### Clean-Up

**U-COAT 301 Insulating Coating** is a water based acrylic product. Clean up immediately after use with soap and water. **Caution:** Use drop cloths and necessary protection to prevent damage from drips or overspray under windy conditions.



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## Thermal Properties

Independent Thermal Evaluation: Thermal conductivity value determined by comparative testing.

$$k_{(eqv)} = 0.23 \text{ (Btu}\cdot\text{in)} / \text{(hr}\cdot\text{ft}^2\cdot\text{°F)}$$

Thermal properties directly relate to the thickness of the product required to insulate a given substrate.

*Rooftop Installation:* 10 mil thickness will reduce under-roof temperature by up to 20°F. Results could vary with application.

## Certified Lab & ASTM Results

SOLAR REFLECTANCE RATING TESTED TO 87.7% Average  
EMITTANCE RATING 85%

### FLAMMABILITY

FLAME SPREAD	5	ASTM E-84
SMOKE DEVELOPED	5	ASTM E-84
TOXICITY	0	ASTM E-84

### MECHANICAL PROPERTIES

CROSS HATCH ADHESION	100%	ASTM D-3359
TENSILE STRENGTH (LB/IN <sup>2</sup> )	66.7	ASTM D-882
ELONGATION	65%	ASTM D-882

### PHYSICAL PROPERTIES

FUNGAL GROWTH	NONE	MIL-STD-810
VAPOR TRANSMISSION	0.635	ASTM E96, Meth. E
ACCELERATED AGING	2000HR.	PASSED ASTM G-53
DENSITY (g/cm <sup>3</sup> ) @ 24C DRIED FILM	0.41	ASTM D- 792
VOLUME NON-VOLATILES	43%	
VOLUME DRIED FILM	83% (+/-2)	
Ph	8.7	
SPECIFIC GRAVITY	0.69	
HEAVY METALS	NONE DETECTED	
CHLORIDES - MERCURY	NONE DETECTED	

## Other Features:

The product, in addition to its outstanding insulating qualities and superior adhesion, has low flame spread, is impact and abrasion resistant, is flexible and assists in protecting coated surfaces from wind driven rain, cold-heating cycling, chemical vapors, and mildew. These qualities make it the standard in ceramic coatings.

## Shipping and Supply Method

U-Coat Brand Products are made available by Orange Technologies, Inc. Call +1 (561) 757-5620 for product availability and pricing information.

## MSDS Information

All ingredients are TSCA registered and are Non-Hazardous and Non-Toxic. For Material Safety Data information, contact Orange Technologies, Inc  
Tel: +1 (561) 757-5620  
E-mail: admin@orangetechnologies.net

## Surfaces

**U-COAT 301 Insulating Coating** can be applied to any of the following clean, dry surfaces.

**Carbon steel, Stainless steel, Chrome, Galvanize, Aluminum, Iron, Fiber-glass, Brass, Cloth, Copper, Stone, Slate, Stainless, Tar, Vinyl, Glass, Polyurethane, Foam, Plexi-glass, Cardboard, Paper, magnesium, Plastic, Glass Pipe, Masonite, Primed Surfaces, Asbestos, Fiber-board, Painted Surfaces, Wood, Granulated Roof Shingles, and more...**

**DO NOT ALLOW TO FREEZE**



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