U-COAT

301 - INSULATING COATING

Orange Technologies, Inc
10018 Spanish Isles Blvd Suite 43
Boca Raton – FL – 33498
Tel: +1 (561) 757-5620
Email: admin@orangetechnologies.net

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Highlights

- 25 Years of Successful Installation (with NO warranty issues)
- Global Distribution
- 3 ISO certified manufacturing locations in the US
- Operating temperature range from -80°F to 350°F
- Low VOC, MAS Green Approved- Approved by FDA and EPA
- Application with no need for shut-down or process interruption
- Quick drying - 1/5 liquid by volume
- Light weight – 5.9lbs per gallon (In Pail)
- Acrylic Latex Binders for long life and UV Resistance
- Inhibits mold and mildew growth
- High Quality with 10 year Manufacturer Warranty
- Full range of quality testing
- Color to tint product may be added in country by distributor
- Remarkable Return on Investment
- Installed by local distributors or local contractor following certification

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Overview

- **A Ceramic Insulation that is a Thin Thermal and Condensation Barrier used as :**
  - Heat and Cold Temp Control
  - Personnel Protection
  - Anti-Sweat Control
  - Acoustics Control
- **And Can be applied to:**
  - Steam Pipes, Process Systems, Storage Tanks, Heat Exchangers
  - Roof Top, ISO containers
  - HVAC ducts, and much more

Offshore Loading Skid Photo Courtesy of Chevron

- **Thermal Effects**
  - keqv value of 0.23 (BTU·in)/(hr·ft²·°F) according to independent tests
  - k value range of 0.49 to 0.63 (BTU·in)/(hr·ft²·°F) per ASTM C-177
- **Fire Safety**
  - LOW FLAME SPREAD of 5 (ASTM E-84) (0 is concrete and 100 is red oak flooring)
  - Lloyd's Register Type Approved

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Test Data

TEST	Results
Adhesion (ASTM D3359)	5A & 5B
Tensile (ASTM D638)	
• Strength, psi	66.7
• Elongation, %	65
Mandrel Bend (ASTM D522)	3/8” Pass
Salt Fog (ASTM B117, 2000hrs, 5%NSS)	
• Scribe	10
• Field	10
Accelerated Aging, \E (ASTM G53, UV-A)	
• 2,000 Hours	1.08 (Excellent)
Total Solids, wt% (ASTM D2369)	82.72%
VOC EPA Method 24 (ASTM D2369)	0.071 lbs/gal
ASTM E84 (Flame Spread)	Class A
ASTM E162	Class A
IMO FTP Code Part 5&6 (Flame Spread)	Pass(Interior Use on Passenger Vessels)
IMO FTP Code Part 2 (Smoke and Toxicity)	Pass (Interior Use on Passenger Vessels)

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Advantages

Personnel Protection

•Piping, flanges, valves, eyewash piping, tanks etc..

Advantages

Personnel Protection

•The base guidelines widely used by industry is generally is for the surface temperature to be less than 140°F(60°C)

•ASTM C1055 (Standard Guide for Heated System Surface Conditions that Produce Contact Burn Injuries) defines the maximum acceptable temperature for a particular surface derived from estimate of the possible or probable contact time.

•Per ASTM 1055, probable contact time established for industry is 5 seconds.

•Per ASTM 1057, a thermesthesiometer may be used to replicate the thermal physical response for the human finger.

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Advantages

Thermesthesiometer Reading After 5 Sec. (Simulated Skin Temperature@ 85°F Ambient)

Coating Thickness	200F	250	300	350
40mils				
1	114	123	135	
60mils				
1	112	121	131	
80mils				
1	112	119	129	130
100mils				
1	110	117	127	130
120mils				
1	108	115	122	129
140mils				
1	103	112	120	127
160mils				
1		112	119	127

Thermestisiometer Probe: Therm-X
Model: XTMS3125 Serial Number: 27758-040413-2

Calibrated by Manufacturer: YES

Advantages

Energy Retention

- Energy Savings
- Improve Process Heating and Cooling
- Reduce Thermal Shock from Environment
- Reduce Thermal Expansion

Advantages

Ease of Inspection

- Fast Visual Assessment
- Ease of Repair

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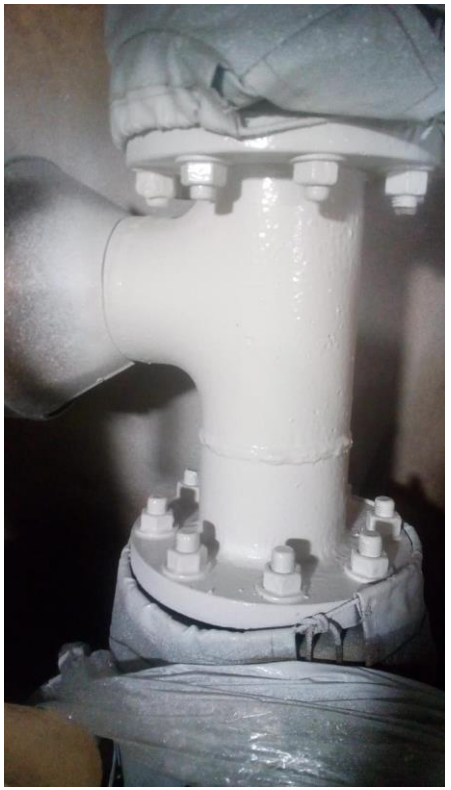
Advantages

Control of CUI

- Seamless Installation
- Adheres to Substrate



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Advantages

Petroleum and Chemical

- Reduces loss due to heating and cooling (sludge build up)
- Eliminates over 85% of solar heat transfer - highly reflective
- Adheres to hot and cold surfaces (-80° F(-66.2C) to +350° F(176.7C) and can insulate surfaces to 500º F
- Can be applied to surfaces up to 350F without disrupting operations
- Does not require jacketing allowing for visual inspection
- No seams to leak and cause corrosion issues
- Not prone to wind, hail or snow load damage
- Adheres directly to surface (eliminating moisture between insulation and surface causing scale and corrosion (CUI)
- Little to no maintenance and easy to use and repair
- Reduces or stops expansion and contraction, which causes roof damage

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More Advantages

- **Creates a better work environment, increasing productivity**
- **Provides a constant, uninterrupted thermal barrier regardless of the length or size of the job**
- **Extremely cost effective**
- **Can be tinted most light to medium colors by manufacturer or in country**
- **Environmentally Friendly: Low VOC's and No Heavy Metals**

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Application Facts

Desired Mil Thickness	Sq Feet per Gallon	Sq Meters per Gallon
240	3.75	.35
200	4.25	.40
180	5.0	.46
160	5.5	.51
140	6.5	.60
120	7.5	.70
100	8.5	.79
80	12.0	1.11
60	15.0	1.39
40	20.0	1.86
30	30.0	2.79
20	40.0	3.72
15	60.0	5.57

**Above Chart Reflects Practical Coverage With Loss

- 15 mil to 20 mil per coat
- Performed by local certified applicators
- Surface application temperatures 45° F and rising (7° C) to 350° F (177° C)
- Uninhibited airless spray application between 15 and 30 mils on flat surfaces, with weather and conditions acceptable, a team of two persons can apply 550 SF per hour using conventional airless spray equipment
- Flash time under normal dry conditions is two (2) hours or less - much faster on warm to hot surfaces

°F of Substrate	°C of Substrate	Rec.Thickness in Mils (1/1000s of an inch)	Rec.Thickness in Millimeters
400**	204	210	5
350*	177	160	4
300	149	130	3
250	121	110	2.5
200	93	80	2
32	0	20	0.5
0	-18	40	1
-30	-34	50	1.2
-45	-40	60	1.5

*May disbond on at temps over 350F, U-COAT HT may be used as base

**Temperatures great that 350F require

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Application Facts

- **Product is 83% Solids By Volume**
- **Surface Preparation: SP2 Hand Tool Cleaning as defined by Steel Structures Paint Council**
- **Appropriate primer recommended for ferrous metals**
- **Product is mixed utilized a square sheet rock mud paddle**
- **Generally installed with airless spray equipment rated at 2 to 3 gallons per minute at 3000 psi**
- **Small applications and repairs may be achieved by use of the U-COAT Gun or brush and roller as needed**

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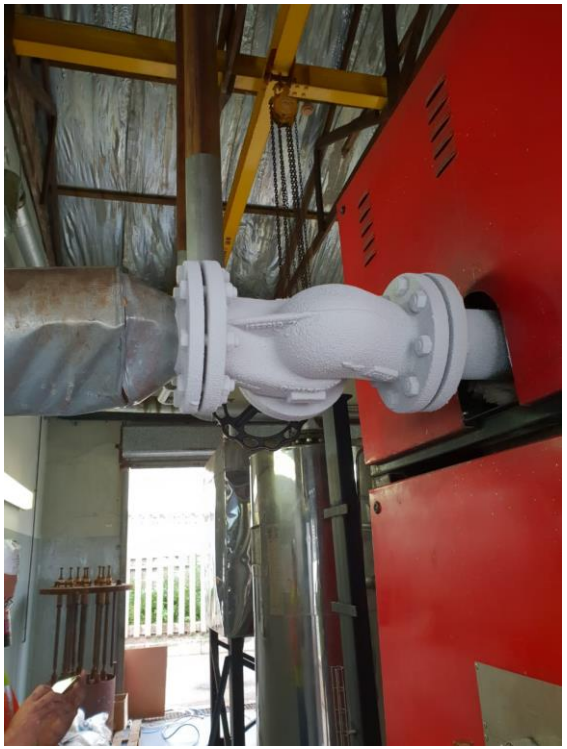
Other Projects



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