

corrosion insulation water-proofing

Rust Grip

Corrosion Encapsulation Technology

"Extend paint life and reduce surface preparation costs by up to 50%"

Paint directly on surface rust and firmly bonded paint



Case Study

Blue Chip Vessel - Boyd Gaming - Michigan City, USA

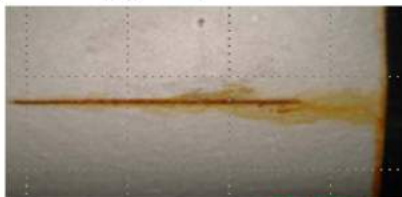
Saved \$2,000,000 by using Rust Grip instead of sand blasting



ASTM B-117 - Salt Spray Test - @150 μ DFT



15,000 hrs - Perfect 10 out of 10



500 hrs - Scribe - No Undercutting

Satisfied Clients



Saipem



Before

After



U.S.A. Patent # 5,695,812

Certifications



Technical Description

RUST GRIP is a tough, single component moisture cure polyurethane coating, loaded with metallic pigments for additional strength. In most cases, a white or near white blasting is not required. RUST GRIP is designed to resist chemical solvents and acid splashes; it can be used as a primer or a one coating system.

Application Method

RUST GRIP can be applied to metal, concrete, masonry & wood. Application can be by airless sprayer or brush/roller. Application thickness depends on surface profile.

Physical Data

- Solids: By Weight 62.2% / By Volume 51.4%
- Overcoat window is three hours or less at 21C
- Cures by absorbing moisture from in the air
- Weight: 9.4 lbs per gallon
- Shelf Life: 3 years if unopened under normal conditions
- VOC Level: 380 grams/liter
- Resistant to most solvents, chemicals, and some acids
- Max. Surface Temp. when applying: 65C
- Min. Surface Temp. when applying: 10C
- Max. Surface Temp. after curing: Constant or greater than 163C

Super Therm

Solar Radiant Barrier (thin film)

"Block & reflect heat to reduce energy & maintenance costs"



Approved
APCS - 5A

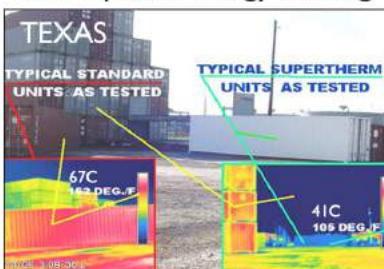
Case Study

Tuscon Int'l. Airport, Arizona, USA

Saved 22% on overall energy bill, 44% on air conditioning



US Dept. of Energy Testing



Surface Temp: 67C Vs 41C



Return on investment: 26 months

Certifications



Technical Description

Designed for performance and durability, SUPER THERM contains 4 unique ceramics to block up to 95% of SOLAR HEAT entering a structure due to VISUAL LIGHT, ULTRA VIOLET (UV), and INFRARED (IR).

Application Method

SUPER THERM can be applied to metal, concrete, masonry and wood. The application can be spray, brush or roller. Applied at 425 micron WFT, 250 micron DFT.

Physical Data

Solids: By Weight 66% / By Volume 63% (+/- 6%)
Vehicle Type: Urethane/Acrylic blend
VOC Level: 21 grams/liter
Viscosity: 105-110 KU
Max. Surface Temp. when applying: 65C
Min. Surface Temp. when applying: 5C
Max. Surface Temp. after curing: 149C

Hot Pipe Coating

High Heat Insulation Coating (thick film)

"Trap heat and eliminate corrosion under insulation."

Paint directly on hot surfaces with no shutdown



Before

After



الامكو السعودية
Saudi Aramco



Approved
APCS 5-B

Case Study

Furnaces - Nucor Steel, USA

Estimated Savings \$44,379,976 per year

Estimated BTU Savings 219,137,000 per hour

HPC skin temperature @ 12mm



Metal temperature under HPC



Original metal temp.
500°F (260°C)

HPC skin temp.
315°F (157°C)

Metal temp. under HPC
838°F (448°C)

Loss Prevention and Safety



Certifications



Technical Description

HPC uses a special acrylic resin blend with non conductive ceramic compounds to control heat transfer on surface up to 450F (232C). It is water-borne, non flammable, non toxic, and extremely lightweight in appearance.

Application Method

HPC can be applied to metal, concrete, wood and other substrates. HPC can be applied directly to hot surfaces using a texture sprayer. If applied outdoors, HPC requires a top coat of Super Therm or Rust Grip.

Physical Data

- Solids: By weight: 50.49% / By volume: 73.00%
- Dry time: 10-30 min, between 200-300F, or until steaming action has finished
- Weight: 5.0 lbs per gallon
- Vehicle: Urethane / Acrylic Blend
- VOC Level: 14 grams/liter
- Shelf Life: 1 year if unopened under appropriate storage conditions
- Lead and chromate free

Enamo Grip

Aliphatic Polyurethane Enamel
Uniquely hard and durable coating film



Approved
APCS 5A top coat

Case Study

Offshore drill pipe risers
(confidential client)



Certifications



Technical Description

Enamo Grip is a two part aliphatic polyurethane enamel available in clear and multiple colors. It forms a uniquely hard and durable coating film, which demonstrates unsurpassed semi gloss and color retention. It is resistant to UV, water, humidity, stains, acids, solvents and chemicals.

Application Method

Enamo Grip can be applied to metal, concrete, masonry, wood and other porous surfaces. Application is by brush/roller or airless sprayer.

Physical Data

- Reacted Solids: White - By weight: 64% / By volume: 49%
- Reacted Solids: Clear - By weight: 44% / By volume: 39%
- Average Perms: 0.6809
- Cures by chemical reaction
- Aliphatic Polyurethane
- Max Surface Temp. when applying 150F (65C)
- Maximum Surface Temp. after curing 300F (149C)
- Shelf life: up to three years (unopened) under appropriate storage conditions

Company Brief:

Refresh Oil and Gas headquartered in Abu Dhabi is a provider of advanced industrial coatings. Our products benefit Government, Oil & Gas, Marine and Construction companies by reducing their energy & maintenance costs, while improving personnel protection. Refresh Oil and Gas is the exclusive representative for the world renowned U.S. coating manufacturer, Superior Products International (SPI Coatings). Through partnerships and proprietary technologies, Refresh Oil and Gas & SPI coatings provide new solutions for corrosion and insulation challenges. Listed below are some of our services:

- *Performance Coatings*
- *Corrosion Protection*
- *Energy Conservation*
- *Environmental Remediation*
- *Personnel Protection*
- *Onshore/Offshore Services*

Mission:

To create sustainable value by delivering innovative industrial solutions which help our customers save time and money by:

- *Reducing maintenance costs related to shutdowns and corrosion*
- *Reducing power consumption through superior insulation*
- *Improving overall operational efficiency and safety*

Vision:

To be the preferred industrial coatings provider for the United Arab Emirates.

For more information on Refresh Oil and Gas, please visit us at:
www.refresh-uae.com