THERMO-SHIELD®

Genuine, Made in USA.

PROTECTIVE COATINGS

Ideal Choice for Demanding Performance and Energy Savings

Al Rahba Medical Center, Abu Dhabi

Thermo-Shield Exterior

BP Amoco, UAE

National Grain Barn, Guangzhou China

Natural Gas Tanks, Tianjin, China

Thermo-Shield Roof Application

SPM THERMO-SHIELD® INC

www.thermoshield.com

COMPANY AND PRODUCTS

SPM THERMO-SHIELD® Inc. specializes in manufacturing protective coatings designed for residential, industrial and commercial applications. The company Headquarters is located in Florida, USA, with international distributors in numerous countries around the world. Thermo-Shield® products have been in the global market since 1984 with remarkable success.

"Thermo-Shield® coatings were specifically designed & developed to solve all the problems associated with common paint and roofing products. They last a very long time, even in the Harshest climates and conditions, and can readily pay for themselves in energy savings"

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7 - WOOD AND DECK COAT

8 - ACRYLIC FLEX TAC

9 - CLEAR COAT

10 - RUST CONVERTER

11 - EXTERIOR / INTERIOR PRIMER

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ENERGY STAR® Roof Products Program
Charter Partner

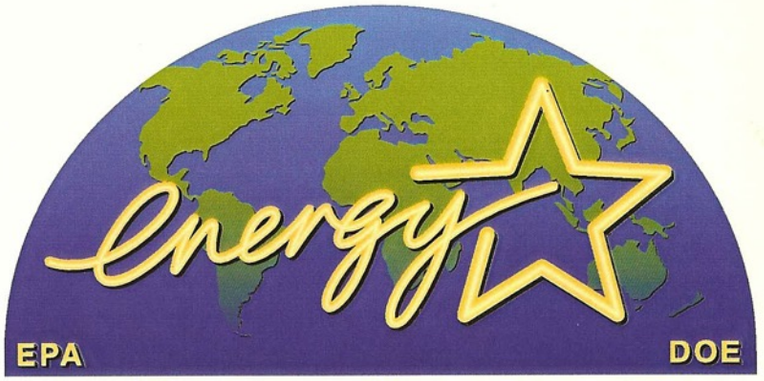
Presented to

SPM THERMO-SHIELD, Inc.

by the U.S. Environmental Protection Agency and
the U.S. Department of Energy for its environmental
leadership and participation as a Charter Partner in
the ENERGY STAR Roof Products Program.

Awarded on February 9, 1999

Paul M. Stolpman
Director, Office of Atmospheric Programs



SAVING THE EARTH. SAVING YOUR MONEY.

ROOF COATS

DESCRIPTION

Thermo-Shield® Roof Coats are highly efficient, energy-saving, flexible coatings, made from a water-based pure acrylic resin system filled with vacuumed sodium borosilicate ceramic micro spheres of less than 100 microns in size. Each micro sphere acts as a sealed cell and the entire mastic acts as a thermally efficient blanket covering the entire structure. These coatings are non-toxic, friendly to the environment, and form a monolithic (seamless) membrane that bridges hairline cracks. They are completely washable and resist many harsh chemicals. Thermo-Shield® Roof Coats have high reflectance and high emittance as well as a very low conductivity value. Thermo-Shield® Roof Coats greatly reduce thermal shock and heat penetration by keeping roof surfaces much cooler in hot summer weather. They offer UV protection and low VOC's. They display excellent dirt pick- up resistance and retain their flexibility after aging. Thermo-Shield® Roof Coats reduce noise transmission and have an effective use range from -40 Deg C (-40 Deg F) to 204 Deg C (400 Deg F).

TYPICAL USES

Primarily used as a roof coating where joints, seams, cracks and gaps around protrusions are reinforced with a 100% polyester spun laced fabric embedded in the membrane. They may be utilized wherever a weather resistant membrane-like coating is required. The ***STANDARD*** formula is used in most climatic conditions. The ***TROPICAL*** formula is used in climatic conditions where fungi growth is a major concern. The ***UL CLASS A*** formula is used on projects where shear extra-high fire resistance is desired (i.e. oil & gas).

PRIMER

No primer is usually required. Follow instructions for proper application regarding guaranteed systems on bitumen roofs. Our Acrylic Flex Tac bonding coat is required to obtain good adhesion between a bitumen substrate and Thermo-Shield® water-based roof coatings. Rusty surfaces require rust control prior to the application of the roof coats. See application manual for details.

SURFACE PREPARATION

All surfaces must be clean and free from laitance (efflorescence), dust, dirt, oil and grease. Minimally, surfaces should be power washed prior to coating, providing this will not damage the roof or cause leaks.

COLORS

White and any custom color available. Darker colors will give a correspondingly lower reflectivity.

SPECIFIED MINIMUM DRY FILM THICKNESS

(See Installer's application manual for application rates on various substrates)
Flat Roofs: 700 microns DFT (27 Mills) at any location
Well Sloped or Pitched Roofs: 380 microns DFT (12 Mills) at any location

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V.O.C.
0.33 lbs / gallon
39.5 grams / liter

THEORETICAL COVERAGE (2 or more coats)
3 m² per gallon at 700 microns DFT (32 sf/gallon at 27 Mills DFT)
7 m² per gallon at 300 microns DFT (75 sf/gallon at 12 Mills DFT)

DRYING TIME
To set: 45 minutes To
re-coat: 12 hours To
through: 12 hours
At 24 Deg C (75 Deg F) and 50% relative humidity
After 45 minutes, Thermo-Shield® Roof Coats have surface set to the point where they are no longer susceptible to airborne dust and will not run in the presence of increased humidity. Do not apply Thermo-Shield® Roof Coat if precipitation is imminent, or is likely to occur before Thermo-Shield® Roof Coats are dry through, or if temperature is expected to drop below 4 Deg C (-40 Deg F).

INSULATION
Reflectance 89%, Emittance 94%, Conductance 0.05 W/mK - unlike typical mass insulation where heat conduction is just slowed down, this technology keeps the heat out. Sun light only produces heat when it is absorbed by a surface. The amount of sun light left over after the *reflection process*, can either be absorbed into the roof surface as heat, or emitted back out into the atmosphere as infrared light, not heat. The *emittance process* leaves less than 2% of the radiant energy to be absorbed into the surface as heat. The Thermo-Shield® coatings, although at a small thickness, have a very low conductivity value to do the rest of the insulation work.

FLEXIBILITY
Coatings remain flexible at -50 Deg F (-45.6 Deg C). Eliminate thermal-shock damage. Maintain their strength at 400 Deg F (204.44 Deg C).

ADHESION
Excellent adhesion to a wide variety of substrates: wood, urethane foam, galvanized steel, aluminum, asphalt roof shingles, concrete, asbestos and many others.

RESISTANCE TO WATER PONDING
Excellent resistance to ponding water. This is the result of a careful balance of the following properties: Passage of bulk water at 50 hours …40-55 mg/m². Permeability (ASTM E 96-80) …08.80% Perms. Film Swelling (at Equilibrium) …10.17%

THINNING
None required. Clean water in small amounts of up to 0.24 Liter (1 cup) per gallon may be added to replace evaporation losses or to adjust for spray equipment configuration. Caution: excessive thinning will cause the coating to lose adhesion and elasticity.

EQUIPMENT
Roller or airless spray application is recommended. Very small areas may be brushed. When Thermo-Shield® Roof Coats are applied by brush, three (3) coats cross-brushed is required for adequate protection.
Airless Sprayer:
Tip Orifice: .031 inches
Atomizing Pressure: 2200 - 2500 psi
Fan Spread: 60 Degrees
Pump: Minimum 1 gallon per minute at 2500 psi
Filter: Remove filters and screens
Prime pump with water before attempting to spray Thermo-Shield® Roof Coats.

VARIABLE PERMEABILITY
This feature, unique to Thermo-Shield®, allows the membrane to perform unlike any other coating. When conditions are dry, the polymers shrink and the pores open to allow trapped water vapor to breathe out of the substrate, but when conditions are wet (raining, ponding of water, etc.), the polymers swell, the pores close, and the entire membrane becomes watertight.

SPREADING RATE PER COAT (1 millimeter = 1000 microns)

	m²/gallon	WFT(microns)	DFT(microns)
Suggested	9	371 (15 mills)	233 (10 mills)
Maximum	12	275 (11 mills)	175 (7 mills)
Minimum	6	567 (23 mills)	350 (14 mills)

This rate allows for 10% loss

MIXING
Stir each container thoroughly using low speed mechanical agitation to avoid air entrapment.

NUMBER OF COATS
Two to three coat application (minimum dry film-build of 700 microns DFT for flat and asphalt shingle granulated roofs and 300 microns for well sloped roofs) will give the best long term protection at minimum cost. The principle cause of coating failure is water ponding in areas of low film thickness (i.e. less than the recommended thickness).
Acceptable equipment includes: Binks Super Hornet, Graco 433 or larger, and many others.

METHODS
To assure adequate and uniform coverage, the “spray and back roll” techniques are recommended. Thermo-Shield® Roof Coats should be applied in full wet coats.

CLEAN UP
Clean tools and equipment with warm soapy water. Rinse with clean water; flush mineral spirits through spray equipment to prevent rusting and to lubricate packing and gaskets.

PACKAGING
5 gallon pails or Lined 55 gallon drums

APPROXIMATE SHIPPING WEIGHT
Net weight per gallon:	4.5 kg (10 lbs)
5 gallon pails:	22.7 kg (50 lbs)
55 gallon drums:	272 kg (600 lbs)

STORAGE
Store at minimum 1 Deg C (33.8 Deg F) - maximum 30 Deg C (86 Deg F) DO NOT FREEZE

SHELF LIFE
Minimum 2 years (keep from freezing)

SETA FLASH POINT
Non-Flammable (water based)

DOT CLASS
Not regulated

PRODUCT CODES
STANDARD WHITE: 5962 / STANDARD ACCENT BASE: 5965
TROPICAL WHITE: 5966 / TROPICAL ACCENT BASE: 5967 / UL CLASS A: 5975

PRODUCT WARRANTY
5 years. Extendible to 10 or 15 years

EXCLUSIVE REMEDY
The sole remedy for goods not in conformance with any warranty is replacement of the product. SPM Thermo-Shield® Inc. shall not be liable for any other damages, including, but not limited to labor expenses.

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Thermo-Shield® is a charter member of the U.S. Government Energy Star Roof Program. The U.S. Department of Energy (DOE), Cool Roof Rating Council (CRRC), the Environmental Protection Agency (EPA) and Underwriter Labratories (UL) state that the following benefits are derived from the use of reflective coatings:

1) Reduction of energy use and cooling costs (up to 40%)
2) Downsizing of air-conditioning equipment
3) Lowering of the surrounding air temperature in a community
4) Decreasing of pollution in urban areas

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EXTERIOR WALL COATS

DESCRIPTION

Thermo-Shield® Exterior Wall Coats are highly efficient, energy-saving, flexible coatings, designed to insulate and waterproof exterior walls. They are non-toxic, friendly to the environment, and form a monolithic (seamless) membrane that bridges hairline cracks. They are completely washable and resist many harsh chemicals and dirt pick-up. These water-based coatings are made from an acrylic resin system filled with vacuumed borosilicate ceramic micro spheres that acts as a thermally efficient blanket. Thermo- Shield® Exterior Wall Coats can be applied by roller or airless sprayer. Thermo-Shield® Exterior Wall Coats put a stop to the "frequent painting cycle" - they outlast other paints several times over. They have superb waterproofing performance, fire resistance and their adhesion increases with saturation. These coatings have "Variable Permeability" - they become watertight when saturated by water, and breathe away trapped water vapor when dry. They protect against UV, greatly reduce thermal shock and sound transmission, and have low VOC levels. These coatings come in a variety of architectural colors and leave a beautiful matt finish.

TYPICAL USES

For painting concrete, metal, wood, polymerized surfaces and reducing condensation.

STANDARD EXTERIOR: Used in most climatic conditions where color fading is a major concern. It has superb fire resistance, excellent chemical resistance to salt spray, strong acids, petroleum products and other harsh chemicals.

TROPICAL EXTERIOR: With the same properties as STANDARD, it is used in climatic conditions where fungi growth is a major concern.

INSULATION

Reflectance 89%, Emittance 94%, Conductance 0.06 W/mK - unlike typical mass insulation where heat conduction is just slowed down, Thermo-Shield® technology keeps the heat out. Sun light only produces heat when it is absorbed by a surface. The amount of sun light left over after the *reflection process*, can either be absorbed into the wall surface as heat, or emitted back out into the atmosphere as infrared light, not heat. The *emittance process* leaves less than 2% of the radiant energy to be absorbed into the surface as heat. The Thermo-Shield® coatings, although at a small thickness, have a very low conductivity value to do the rest of the insulation work.

PRIMER

No primer is usually required, however, it is recommended over gypsum board.

SURFACE PREPARATION

All surfaces must be clean and free from laitance (efflorescence), dust, dirt, rust, oil and grease. Minimally, surfaces must be cleaned to remove any loose or chipped paint, or any other foreign material prior to coating.

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COLORS
White and any custom color available. Darker colors will give a correspondingly lower reflectivity.

V.O.C.
0.33 lbs / gallon
39.5 grams / liter

THEORETICAL COVERAGE (2 Coats)
10.4 m^2 per gallon at 150 microns DFT (112 sf/gallon at 6 Mills DFT)

DRYING TIME
To set: 20 minutes
To re-coat: 4 hours
To through: 12 hours
At 24 Deg C (75 Deg F) and 50% relative humidity
Effective temperature range - 40 Deg C (- 40 Deg F) to 204 Deg C (400 Deg F)

THINNING
None required. Clean water in small amounts of up to 0.24 Liter (1 cup) per gallon may be added to replace evaporation losses or to adjust for spray equipment configuration.
Caution: excessive thinning will cause the coating to lose adhesion and elasticity.

EQUIPMENT
Roller or airless spray application is recommended. Very small areas may be brushed. When Thermo-Shield® Exterior Wall Coats are applied by brush, three (3) coats cross-brushed is required for adequate protection.
Airless Sprayer:
Tip Orifice: .031 inches
Atomizing Pressure: 2200 - 2500 psi
Fan Spread: 60 Degrees
Pump: Minimum 1 gallon per minute at 2500 psi
Filter: Remove filters and screens
Prime pump with water before attempting to spray Thermo-Shield® Exterior Wall Coats.
Acceptable equipment includes: Binks Super Hornet, Graco 433 or larger, and many others.

METHODS
To assure adequate and uniform coverage, the “spray and back roll” techniques are recommended - spray all coats in the same direction, do not cross spray to avoid showing undulations and other small imperfections in the walls. Thermo-Shield® Exterior Wall Coats should be applied in full wet coats.

CLEAN UP
Clean tools and equipment with warm soapy water. Rinse with clean water; flush mineral spirits through spray equipment to prevent rusting and to lubricate packing and gaskets.

PACKAGING
5 gallon pails or Lined 55 gallon drums.

APPROXIMATE SHIPPING WEIGHT
Net weight per gallon:	4.5 kg (10 lbs)
5 gallon pails:	22.7 kg (50 lbs)
55 gallon drums:	272 kg (600 lbs)

STORAGE
Minimum 1 Deg C (33.8 Deg F) – Maximum 30 Deg C (86 Deg F). DO NOT FREEZE

SHELF LIFE
Minimum 2 years (keep from freezing)

SETA FLASH POINT
Non-Flammable (water based)

DOT CLASS
Not regulated

PRODUCT CODES
EXTERIOR WHITE: 5961 / EXTERIOR WHITE TROPICAL: 5968
EXTERIOR ACCENT BASE: 5964 / EXTERIOR ACCENT BASE TROPICAL: 5969

PRODUCT WARRANTY
10 years

EXCLUSIVE REMEDY
The sole remedy for goods not in conformance with any warranty is replacement of the product. SPM Thermo-Shield® shall not be liable for any other damages, including, but not limited to labor expenses.

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INTERIOR WALL COATS

DESCRIPTION

Thermo-Shield® Interior Wall Coats are highly efficient, energy-saving, flexible coatings, designed to insulate and waterproof your walls. They are non-toxic, friendly to the environment, and form a monolithic (seamless) membrane that bridges hairline cracks.
They are completely washable and resist many harsh chemicals and dirt pick-up. These water-based coatings are made from an acrylic resin system filled with vacuumed ceramic micro spheres that acts as a thermally efficient blanket. Thermo-Shield® Interior Wall Coats can be applied by roller or sprayer. Thermo-Shield® Interior Wall Coats have 4 times the fire resistance and 1/26th the smoke development necessary to classify for Class I rating. They have superb adhesion, chemical resistance and reduce sound transmission and echo. They help maintain a more uniform temperature ceiling-to-floor and reduce cold weather heat loss through walls and ceilings. These coatings come in a variety of architectural colors and leave a beautiful matt finish.

INSULATION

Reflectivity 89%, Emittance 94%, Conductance 0.06 W/mK

TYPICAL USES

For regular indoor painting where durability, *reduction of the noise factor* and *superb smoke protection* are important. Thermo-Shield® Interior Wall Coats reduce condensation and *help maintain an even level of comfort in the room*.

STANDARD INTERIOR: Used in most climatic conditions. It has superb fire resistance, chemical resistance and is non-toxic, safe and washable.

TROPICAL INTERIOR: With the same properties as STANDARD, it is used in climatic conditions where fungi growth is a major concern.

PRIMER

No primer is usually required but it is recommended over gypsum board. Follow instructions for proper application and film build-up.

SURFACE PREPARATION

All surfaces must be clean and free from laitance (efflorescence), dust, dirt, rust, oil and grease. Minimally, surfaces must be cleaned to remove any loose or chipping paint, or any other foreign material prior to coating.

COLORS

White and any custom color available. Darker colors will give a correspondingly lower reflectivity.

THEORETICAL COVERAGE (2 Coats)

10.4 m^2 per gallon at 150 microns DFT (112 sf/gallon at 6 Mills DFT)

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SHELF LIFE
Minimum 2 years (keep from freezing)

DRYING TIME
To set: 20 minutes / Too re-coat: 4 hours / To through: 12 hours
At 24 Deg C (75 Deg F) and 50% relative humidity

THINNING
None required. Clean water in small amounts of up to 0.24 Liter per gallon (1 cup) may be added to replace evaporation losses or to adjust for spray equipment configuration. Caution: excessive thinning will cause the coating to lose adhesion and elasticity.

EQUIPMENT
Roller or airless spray application is recommended. Very small areas may be brushed. When Thermo-Shield® Interior Wall Coat is applied by brush, three (3) coats cross-brushed is required for adequate protection.
Airless Sprayer:
Tip Orifice: .031 inches
Atomizing Pressure: 2200 - 2500 psi
Fan Spread: 60 Degrees
Pump: Minimum 1 gallon per minute at 2500 psi
Filter: Remove filters and screens
Prime pump with water before attempting to spray Thermo-Shield® Interior Wall Coat. Acceptable equipment includes: Binks Super Hornet, Graco 433 or larger, and many others.

METHODS
To assure adequate and uniform coverage, the “spray and back roll” techniques are recommended. Do not cross spray - each coat should be sprayed in the same direction to avoid showing undulations and other imperfections in the walls. Thermo-Shield® Interior Wall Coats should be applied in full wet coats.

CLEAN UP
Clean tools and equipment with warm soapy water. Rinse with clean water; flush mineral spirits through spray equipment to prevent rusting and to lubricate packing and gaskets.

PACKAGING
1 gallon cans, 5 gallon pails and Lined 55 gallon drums.

APPROXIMATE SHIPPING WEIGHT
Net weight per gallon:	4.5 kg (10 lbs)
Case of 4, 1 gallon cans:	19.96 kg (44 lbs)
5 gallon pails:	22.7 kg (50 lbs)
55 gallon drums:	272 kg (600 lbs)

V.O.C.
39.5 grams / liter (0.33 lbs / gallon)

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STORAGE
Store at minimum 1 Deg C (33.8 Deg F) - maximum 30 Deg C (86 Deg F)
DO NOT FREEZE

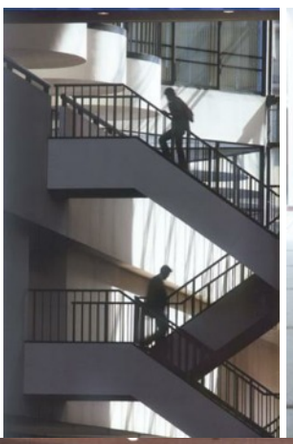
SETA FLASH POINT
Non-flammable

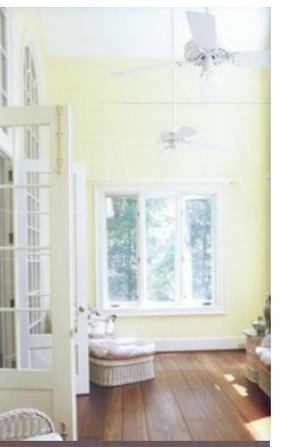
DOT CLASS
Not regulated

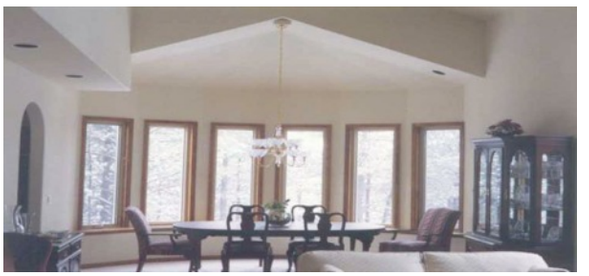
PRODUCT CODES
INTERIOR WHITE: 5977 / INTERIOR ACCENT BASE: 5963 / INTERIOR TROPICAL: 5976

PRODUCT WARRANTY
10 years

EXCLUSIVE REMEDY
The sole remedy for goods not in conformance with any warranty is replacement of the product. SPM Thermo-Shield® Inc. shall not be liable for any other damages, including, but not limited to labor expenses.





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TANK SHIELD

DESCRIPTION

Thermo-Shield® Tank Shield is a highly efficient, energy-saving, flexible coating, designed to protect and lower the external surface temperature of storage vessels. It is non-toxic and friendly to the environment. It is completely washable and resists many harsh chemicals and dirt pick-up. This water-based coating is made from an acrylic resin system filled with vacuumed ceramic micro spheres that acts as a thermally efficient blanket. Thermo- Shield® Tank Shield has superb fire resistance - it is grade Class A by UL Standards. It can be obtained in a variety of architectural colors for signs and logo making. It leaves a beautiful matt finish but can be made glossy when coated with Thermo-Shield® Clear Coat.

TYPICAL USES

For the exterior of steel petroleum storage tanks and pipelines where the reduction of surface temperature is desired. Used also for the exterior of steel or polymer water tanks, grain storage silos and the exterior of most chemical storage tanks. This coating is resistant to 26 different harsh chemicals including 20% hydrochloric and 25% sulfuric acids.

PRIMER

Use alkyd or epoxy quality primers where required and/or rust inhibitors to make sure rust will not be present during the application of the coating.

SURFACE PREPARATION

All surfaces must be clean and free from rust, dust, dirt, oil or grease. Minimally, surfaces must be cleaned to remove any loose or chipped paint or any other foreign material prior to the application of Tank Shield. Rust should be controlled with the use of rust inhibitors.

COLORS

White and any custom color available. Darker colors will give a correspondingly lower reflectivity.

V.O.C.

0.33 lbs / gallon
39.5 grams / liter

THEORETICAL COVERAGE (2 to 3 Coats)

7 m² per gallon at 380 microns DFT (75 sf/gallon at 12 mills DFT) with no loss

DRYING TIME

To set: 45 minutes / To re-coat: 12 hours / To through: 12 hours
At 24 Deg C (75 Deg F) and 50% relative humidity

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INSULATION
Reflectance 89%, Emittance 94%, Conductance 0.05 W/mK

FLEXIBILITY
Coatings remain flexible at -50 Deg F (-45.6 Deg C). Eliminate thermal-shock damage. Maintain their strength at 400 Deg F (204.44 Deg C).

ADHESION
Excellent adhesion to steel and a wide variety of substrates: wood, urethane foam, galvanized steel, aluminum, concrete, asbestos and many others.

SPREADING RATE PER COAT (1 millimeter = 1000 microns)

	m²/gallon	WFT(microns)	DFT(microns)
Suggested	6.7	556 (22 mills)	330 (13 mills)
Maximum	8.7	445 (18 mills)	254 (10 mills)
Minimum	5.8	635 (25 mills)	394 (16 mills)

This rate allows for 10% loss

MIXING
Stir each container thoroughly using low speed mechanical agitation to avoid air entrapment.

NUMBER OF COATS
Two to three coat application (minimum dry film-build of 380 microns with a minimum of 300 microns at any location) will give the best long term protection at minimum cost.

THINNING
None required. Clean water in small amounts of up to 0.24 Liter (1 cup) per gallon may be added to replace evaporation losses or to adjust for spray equipment configuration. Caution: excessive thinning will cause the coating to lose adhesion and elasticity.

EQUIPMENT
Roller or airless spray application is recommended. Very small areas may be brushed. When Thermo-Shield® Tank Shield is applied by brush, three (3) coats are required for adequate protection.
Airless Sprayer: Apply all coats in the same direction. Do not cross spray. Cross spraying may reveal surface imperfections such as small undulations, etc.
Tip Orifice: .031 inches
Atomizing Pressure: 2200 - 2500 psi
Fan Spread: 60 Degrees
Pump: Minimum 1 gallon per minute at 2500 psi
Filter: Remove filters and screens
Prime pump with water before attempting to spray Thermo-Shield® Tank Shield.
Acceptable equipment includes: Binks Super Hornet, Graco 433 or larger, and many others.

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CLEAN UP
Clean tools and equipment with warm soapy water. Rinse with clean water; flush mineral spirits through spray equipment to prevent rusting and to lubricate packing and gaskets.

PACKAGING
5 gallon pails or Lined 55 gallon drums

APPROXIMATE SHIPPING WEIGHT
Net weight per gallon:	4.5 kg (10 lbs)
5 gallon pails:	22.7 kg (50 lbs)
55 gallon drums:	272 kg (600 lbs)

STORAGE
Store at minimum 1 Deg C (33.8 Deg F) - maximum 30 Deg C (86 Deg F) DO NOT FREEZE

SHELF LIFE
Minimum 2 years (keep from freezing)

SETA FLASH POINT
Non-Flammable (water based)

DOT CLASS
Not regulated

PRODUCT CODE
TANK SHIELD: 5978

PRODUCT WARRANTY
5 years. Extendible to 10 or 15 years

EXCLUSIVE REMEDY
The sole remedy for goods not in conformance with any warranty is replacement of the product. SPM Thermo-Shield® Inc. shall not be liable for any other damages, including, but not limited to labor expenses.





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METAL PRIMER

DESCRIPTION
Thermo-Shield® Metal Primer is rust inhibitive, water based, high quality, 100% acrylic resin, corrosion resistant coating.

TYPICAL USES
It is used as a Primer / Base Coat on all rusty metal tanks & pipelines, water tanks, silos, storage bins, metal roofs, beams etc., surfaces, prior to the application of Thermo-Shield® Roof Coat or Tank Shield.

SURFACE PREPARATION
Good cleaning of the metal must precede the Metal primer application. Surface must be cleaned of grease, oil, dirt and loose rust with a power sander or grinder, or wire brushing.

ADHESION
Very good to steel and iron surfaces, becomes part of the piece that is painted.

APPLICATION
Apply with brush, roller, or airless spray equipment.

THEORETICAL COVERAGE
14 – 23 m2 / Gallon (150 – 250 sf / Gallon) Per Coat
3.7- 6.0 m2 / Liter - Per Coat
*Minimun of 2 coats required

DRYING TIME
1 hour to touch (77 F & 50% relative humidity) 4 hours to re-coat.

PACKAGING
5 gallon pails and Lined 55 gallon drums.

PRODUCT DATA
Solvent: Water
Flash Point: Non-Flammable (water based) DO NOT FREEZE
Percent Volatile by Volume: 62%
Weight by Gallon: 10.65 Lbs
V.O.C.: 0.31 Lbs/Gallon

PRODUCT CODE
METAL PRIMER: 5980

STUCCO SHIELD

DESCRIPTION

Thermo-Shield® Stucco Shield is a water base protective coating that can be applied in place of paint, and as an alternative to the conventional and often costly three and more part stucco systems. This unique wall coating can be applied quickly, is much less labor intensive and provides an effective and durable thermal barrier. The base and finish coats incorporate hollow borosilicate ceramic micro spheres. These micro spheres reflect, refract and dissipate heat away from the coated surface. The formula also incorporates a 100% acrylic polymer resin that allows the transmission of water vapor to escape, thus reducing moisture build-up in the wall assembly. This flexible stucco coating bridges hairline cracks and prevents the development of new ones.

COMPONENTS

Pre-mixed base coat and pre-mixed finish coat.

TYPICAL USES

Stucco Shield is designed for interior and exterior wall surfaces as a flexible wall coating. It can be applied over drywall, wood, steel, reinforced insulation board, brick, concrete block, concrete and over existing stucco. It is designed to go on ready-to-paint surfaces that meet local standards and building codes.

DRYING TIME

Base Coat, one hour to set and 12 hours to re-coat. Finish Coat, 40 to 70 hours to cure at 24 Deg C (75 Deg F) and 50% relative humidity.

COLORS AVAILABLE

White and custom colors available.

CONTAINER SIZE

Available in 5 gallon containers.

SHELF LIFE

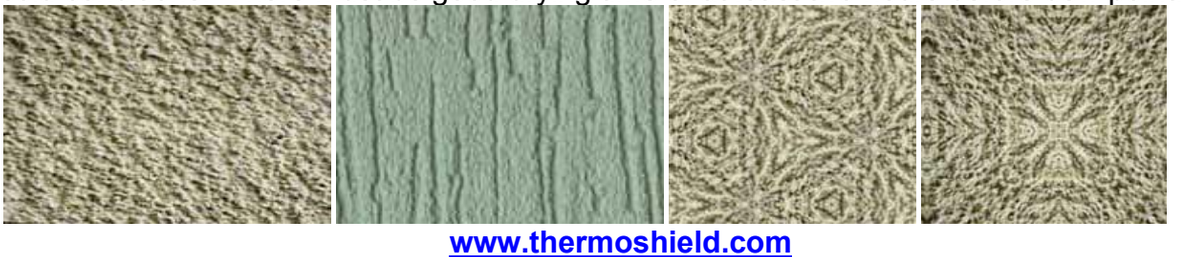
Two years. Store at room temperatures between 10 and 32 Deg C (50 and 89 Deg F).

CLEAN UP

Clean tools and equipment with soap and warm water; rinse with clean water.

LIMITATIONS

Do not apply Stucco when freezing temperatures are expected within 48 hours or when rain is predicted. Ambient temperature should be 10 Deg C (50 Deg F) or above for at least 24 hours; water-based coatings depend on evaporation to cure so avoid application in damp or cold conditions. There must be good drying time of at least two hours before dew point.



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APPLICATION PROCEDURES

Apply a coat of Stucco Base Coat to the entire substrate. Prepare corners and joints with recommended corner bead, mesh and Stucco Finish Coat. Allow drying and then apply a coat of Finish Coat to the entire structure (see application manual for more detailed information).

APPLICATION

Stucco has a spray or roll-on viscosity. Commercial sprayers with texture guns can be used to apply this coating. Various textures may be achieved, from a very fine sand finish to a heavy plaster coat (see manufacturer's specifications for each individual sprayer).

BASE COAT

Roller or airless spray application is recommended. Use a roller with a nap of 19mm or airless spray unit with the following qualifications,
Tip orifice: .031 to .039 inch
Pressure: 2200 to 2500 psi

PRODUCT WARRANTY

10 years

PRODUCT CODE

BASE COAT: 5974 / FINISH COAT: 5973

EXCLUSIVE REMEDY

The sole remedy for goods not in conformance with any warranty is replacement of the product. SPM Thermo-Shield® shall not be liable for any other damages, including, but not limited to labor expenses.

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APPLICATION PROCEDURES

1. Apply a coat of Thermo-Shield® Base Primer Coat to the entire surface.

2. Prepare corners and joints with recommended corner bead, mesh and Stucco Finish Coat and allow drying.

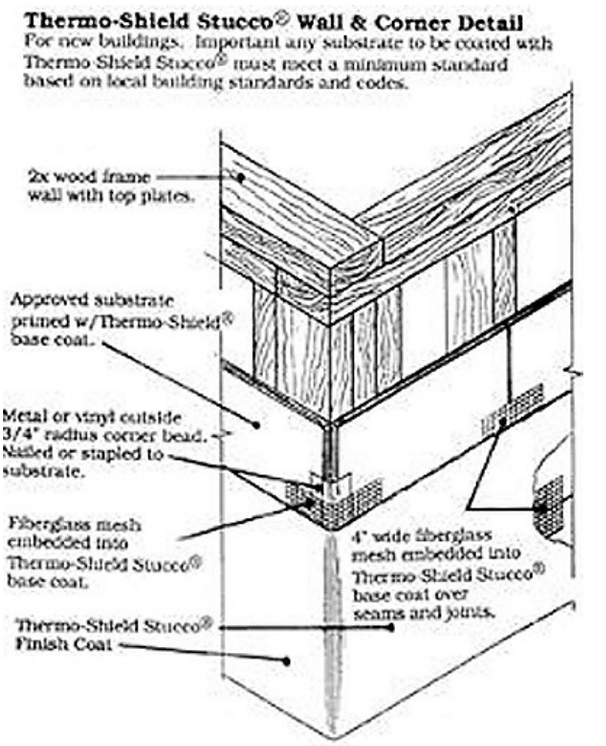
3. Apply a coat of Stucco Finish Coat to the entire surface. Use sprayer, trowel or texture roller for desired texture.

APPLICATION AND TEXTURE

TROWEL APPLICATION: Thermo-Shield® Stucco Finish Coat may be applied directly from the pail to the wall surface at a uniform wet thickness of 3 mm with a coverage of 2 to 2.6 m² per gallon depending on the trowel finish desired.

SPRAY APPLICATION: Thermo-Shield® Stucco Finish Coat can be spray-applied with a commercial spray apparatus. Various textures may be achieved, from a very fine sand finish to a heavy plaster coat.

BASE COAT: Roller or airless spray application is recommended. Use a roller with a minimum 3/4 " nap or airless spray unit with a tip orifice of .031" and 2200 to 2500 psi of pressure.



Detailed Drawings Available Upon Request

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WOOD & DECK COAT

DESCRIPTION

Thermo-Shield® Wood & Deck Coat has been tested for UV and moisture resistance under ASTM. This water-based sealer contains the finest resins available to provide a long- lasting finish and to outperform conventional sealers.

Rain and sun attack unprotected exterior wood surfaces resulting in costly damage to your wood surfaces. Water soaks deep into exterior surfaces causing them to expand. The heat of the sun pulls moisture out of these surfaces leaving them dry and brittle. This on-going cycle of expansion and contraction causes wood to swell, crack and splinter.

THERMO-SHIELD® WOOD & DECK COAT OFFERS 4-WAY BENEFITS

UV Block

A special additive designed to protect against the harmful rays of the sun.

Moisture Resistance

Wood & Deck Coat penetrates deep into the wood surface providing a clear finish that blocks water out and allows the wood surface to breathe.

Beautifies and Enhances

Thermo-Shield® Wood & Deck Coat beautifies and enhances wood surfaces old and new as it dries to a clear matt finish.

Deep Penetrating Acrylic-Latex Resins

The resins in Thermo-Shield® Wood & Deck Coat penetrate deep into the wood fibers binding them together to give longer protection. It bonds old wood surfaces reducing splintering.

Thermo-Shield® Wood & Deck Coat protects all types of wood from damaging water penetration, including pressure treated wood. It reduces splitting, swelling, warping, shrinking and grain rising caused by water damage. It resists graying and fading caused by exposure to the sun.

NOTE

This product is not intended for use as a furniture finish or interior paneling finish coat.

SURFACE PREPARATION

All surfaces must be clean and free from dust, dirt, oil, grease and paint.

COLOR

Clear

THEORETICAL COVERAGE (2 Coats)

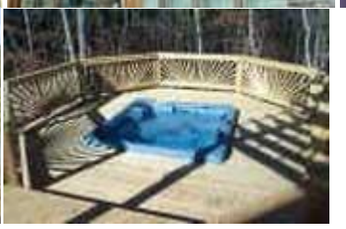
18.6 to 32.5 m² (200 to 350 sf) per gallon per application.

STORAGE
Minimum 1 Deg C (33.8 Deg F)
Maximum 30 Deg C (86 Deg F)
DO NOT FREEZE

PRODUCT CODE
WOOD & DECK COAT: 5970







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ACRYLIC FLEX TAC

DESCRIPTION
Thermo-Shield® Exterior Acrylic Flex Tac is a bonding coat to be used over bitumen surfaces prior to the application of Thermo-Shield® Roof or Wall Coats.

APPLICATION (1 Coat)
Apply Acrylic Flex Tac by roller or airless spray on a clean surface at approximately 6.2 square meters per gallon (67 sq ft) in a one coat application. Allow drying time for a minimum of 12 hours before the application of Thermo-Shield® Roof or Wall Coats. Do not apply in freezing weather, or when precipitation is imminent.

CLEAN UP
Use soap and warm water to clean tools and equipment. Rinse with clean fresh water.

STORAGE AND PACKING
Store the 5 gallon pails at temperatures between 5 and 30 Deg C (41and 86 Deg F).

PRODUCT CODE
ACRYLIC FLEX TAC: 5972

BITUMEN SURFACE

ACRYLIC FLEX TAC

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CLEAR COAT

DESCRIPTION

Thermo-Shield® Clear Coat is a tough acrylic coating designed to seal, preserve, protect and rejuvenate a variety of substrates. As a result of its low viscosity and microscopic penetrating properties, Thermo-Shield® Clear Coat locks into the substrate to produce a water-repellency barrier. Additional chemical agents are added to resist mold, mildew and fungus growth.

This product is also designed to give Thermo-Shield® Roof Coat, Thermo-Shield® Wall Coats, Stucco Shield and Tank Shield a glossy surface. This product will also protect white surfaces from the effects of smog and automobile gas pollution. It is non-toxic and friendly to the environment. It is completely washable and highly resistant to dirt pick-up. This water-based coating is made from an acrylic resin and dries to a beautiful, non-yellowing, clear and shiny / glossy finish.

TYPICAL USES

Thermo-Shield® Clear Coat was specifically engineered and developed as a penetrating sealer for use on surfaces such as asphalt / asbestos / fiberglass and cedar shake shingles, fiberglass and polycarbonate skylights, concrete, brick, stucco, synthetic and natural stone, slate, brick / barrel / concrete and clay tiles, aluminum and metal surfaces.

It is also applied as a glossy coat on Thermo-Shield® Roof Coat, Exterior Wall Coats, Stucco Shield or Tank Shield, or as extra protection against smog stains on white Thermo-Shield® Roof Systems. This coating will give a lasting shine without getting dull, cracking or peeling. Use over white Roof Coat in carbon-polluted environments. Smog and pollution fallout in the air can turn the surface of white Roof Coats into a gray color; Thermo-Shield® Clear Coat will prevent this from happening.

SURFACE PREPARATION

All surfaces must be clean, dry and free of dust, dirt, oil, grease and mildew. Remove any trace of mildew by washing with a solution that kills mildew spores. Old paint/coating or residue that is loose or peeling must be removed by scraping, sanding, wire brushing or pressure washing. Avoid using cleaners with built-in wax or silicone additives since this may affect coating bond. Make any necessary repairs or replacements to damaged or leaking roof material. Rusty metal surfaces should be primed with the proper material, see Thermo- Shield® Metal Primer.
Note: To assure proper adhesion to the substrate, a small test area is recommended prior to full project application. Coat test area, wait minimum 72 hours (at 75 degrees F / 24 degree C and 70% relative humidity) and then check the test area for adhesion. The coating should have become securely bonded to the substrate.

COLOR

Natural Clear when dry.

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APPLICATION

Be sure to use a clean brush or roller to avoid contaminating the product with other pigments or color. Apply with a brush, roller (1 1/4" Nap), or airless spray equipment (see details below).
If applied directly onto a variety of existing substrates for protection, preservation and sealing: Apply 0.4 L / m² (100 square feet / gallon) with 2 coats minimum application.
If applied over Thermo-Shield® Roof Coats, Exterior Wall Coats, Tank Shield or Stucco Shield to achieve a glossy finish: Apply 1 liter / 9.7 to 14.5 m² (395 to 590 square feet / gallon) with a 1 coat application.

DRYING TIME

To set: 2 hours
To re-coat: 12 hours
At 24 Deg C (75 Deg F) and 50% relative humidity
Drying time is retarded by very high humidity. Do not apply at temperatures below 50 Deg F. Coating should have ample time to surface dry before evening dew sets or it is rained upon.

EQUIPMENT

Roller or airless spray application is recommended. Very small areas may be brushed.
Airless Sprayer:
Tip Orifice: .0517 inches (minimum)
Atomizing Pressure: 2000 psi (minimum)
Fan Spread: 60 Degrees
Pump: Minimum 0.5 gallon per minute
Prime pump with water before attempting to spray Thermo-Shield® Clear Coat.

CLEAN UP

Clean tools and equipment with warm soapy water. Rinse with clean water; flush mineral spirits through spray equipment to prevent rusting and to lubricate packing and gaskets.

PACKAGING

3.3 gallon (12.5 Liter) pails, 5 gallon (19 Liter) pails and Lined 55 gallon (209 Liter) drums.

APPROXIMATE SHIPPING WEIGHT

Net weight per gallon: 3.9 kg (8.6 lbs)

STORAGE

Store at minimum 1 Deg C (33.8 Deg F) - maximum 30 Deg C (86 Deg F)
DO NOT FREEZE

PRODUCT CODE

CLEAR COAT: 5979

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RUST CONVERTER

DESCRIPTION

Thermo-Shield® Rust Converter stops existing rust, prevents future corrosion and provides bleed-through protection with a durable protective barrier. No need for sandblasting, scraping or grinding. Thermo-Shield® Rust Converter is water-based, high quality, unique rust treatment coating.

TYPICAL USES

It is used as a Primer / Base Coat on all rusty metal tanks & pipelines, water tanks, silos, storage bins, metal roofs, beams etc., surfaces, prior to the application of Thermo-Shield® Roof Coat or Tank Shield.

SURFACE PREPARATION

Surface must be cleaned of grease, oil, dirt, salt, loose rust or water soluble chemicals with a high strength cleaner and then rinsed thoroughly with water. Remove blistered and loose paint, loose rust scale and heavy rust buildup. Do not remove all rust. Best results are achieved when all rusted areas are exposed and a thin layer of rust remains on the surface.

ADHESION

Very good to steel and iron surfaces, becomes part of the piece that is painted.

APPLICATION

Mix Rust Converter thoroughly before using. Pour the estimated amount needed for the job into a clean container.

NOTE: Rust Converter cannot be returned to the original container after use. Work into rusted surface with a bristle brush. Two coats (2) cross-brushed is required for adequate protection. On large areas apply with roller or airless spray equipment. Dries to durable black matte finish when applied to rusted surfaces and remains clear when applied over non-rusted metal or other coatings.

THEORETICAL COVERAGE (2 Coats)

16 – 23 m2 / Gallon (175 – 250 sf / Gallon)
4.2- 6.0 m2 / Liter

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DRYING TIME
30 minutes to touch (77 F & 50% relative humidity) re-coat within 3 - 4 hours. Dry 24 - 72 hours before applying Thermo-Shield® Roof Coat or Tank Shield.

PACKAGING
1 gallon bottles, 5 gallon pails and Lined 55 gallon drums.

PRODUCT DATA
Solvent: Water
Flash Point: Non-Flammable (water based) DO NOT FREEZE
Percent Volatile by Volume: 60%
Weight by Gallon: 8.5 Lbs
No•V.O.C.'s

PRODUCT CODE
RUST CONVERTER: 5983

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DRYING TIME
30 minutes to touch (77 F & 50% relative humidity) re-coat within 3 - 4 hours. Dry 24 - 72 hours before applying Thermo-Shield® Roof Coat or Tank Shield.

PACKAGING
1 gallon bottles, 5 gallon pails and Lined 55 gallon drums.

PRODUCT DATA
Solvent: Water
Flash Point: Non-Flammable (water based) DO NOT FREEZE
Percent Volatile by Volume: 60%
Weight by Gallon: 8.5 Lbs
No•V.O.C.'s

PRODUCT CODE
RUST CONVERTER: 5983

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EXTERIOR / INTERIOR PRIMER

DESCRIPTION

Thermo-Shield® Exterior / Interior Primer is a water-based elastomeric coating and sealant made from 100% acrylic resins. This extremely durable, penetrating sealant is specifically designed with tenacious adhesion to be used as a prep and prime coat and/or to restore coarse or highly weathered surfaces. This product is made with mildew resistant agents and is highly resistant to the sun's ultraviolet rays. Thermo-Shield® Exterior / Interior Primer is a permanently flexible, breathing membrane, allowing moisture from the substrate or building interior to escape while remaining impervious to water penetration from the exterior.

TYPICAL USES

Thermo-Shield® Exterior / Interior Primer is engineered and developed to perform well under severe industrial, commercial, institutional, residential and agricultural applications. This product is ideal for use over gypsum board, in addition, when local codes require the use of a primer on exterior and/or interior concrete block, pre-cast concrete, masonry, wood shake, brick, stone, slate, stucco and wood.

SURFACE PREPARATION

All surfaces must be clean, dry and free of dust, dirt, oil, grease and mildew. Remove any trace of mildew by washing with a solution that kills mildew spores. Old paint/coating or residue that is loose or peeling must be removed by scraping, sanding, wire brushing or pressure washing. Avoid using cleaners with built-in wax or silicone additives since this may affect coating bond.

APPLICATION

This product is designed as a low-hide base or primer coat only. It is not intended to be used as a top or finish coat. Maximum adhesion is achieved only when the surface is clean, dry and properly prepared. Apply one coat at approximately 0.8 L – 1.2 L / m² (200 – 300 square feet / gallon); material requirements will increase with coarse or highly weathered surfaces. A continuous film should be applied, making sure all surfaces are uniformly coated and free from voids, pinholes and blisters. Apply with a brush, roller (1 14" Nap) or spray equipment (see details below).

DRYING TIME

To set: 1 hour
To re-coat: 4 hours
At 24 Deg C (75 Deg F) and 50% relative humidity
Drying time is retarded by very high humidity. Do not apply at temperatures below 50 Deg F. Do not apply when rain is eminent.

EQUIPMENT

Roller or airless spray application is recommended. Very small areas may be brushed.
Airless Sprayer:
Tip Orifice: .0517 or 0.515 inches (minimum)
Atomizing Pressure: 2000 psi (minimum) Fan
Spread: 60 Degrees
Pump: Minimum 0.5 gallon per minute
Prime pump with water before attempting to spray Thermo-Shield® Ext / Int Primer.

COLOR

White

CLEAN UP

Clean tools and equipment with warm soapy water. Rinse with clean water; flush mineral spirits through spray equipment to prevent rusting and to lubricate packing and gaskets.

PACKAGING

3.3 gallon (12.5 Liter) pails, 5 gallon (19 Liter) pails and Lined 55 gallon (209 Liter) drums.

APPROXIMATE SHIPPING WEIGHT

Net weight per gallon: 4.85 kg (10.7 lbs)

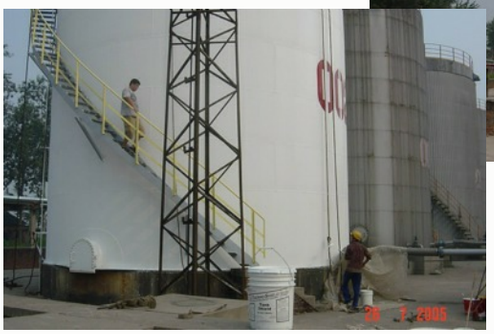
STORAGE

Store at minimum 1 Deg C (33.8 Deg F) - maximum 30 Deg C (86 Deg F)
DO NOT FREEZE

]*PRODUCT CODE*

EXTERIOR / INTERIOR PRIMER: 5985

Bank of China, Tianjin China

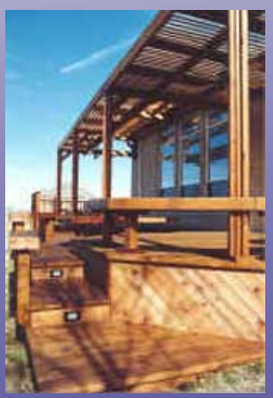


Shijiazhuang Refinery, China

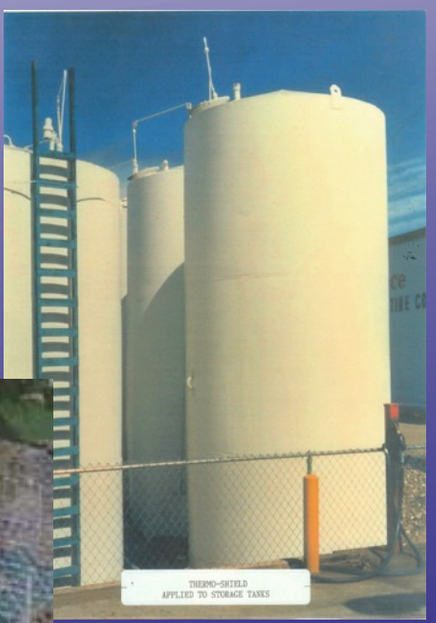
THERMO-SHIELD®

Genuine Made in USA

Broadmoor Hotel Convention Center,



Thermo-Shield Wood & Deck



Grain Storage Bins USA

Abu Dhabi Crown Prince's Villa

Thermo-Shield Roof -Toy's R Us, Dubai

SPM THERMO-SHIELD, INC.

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