



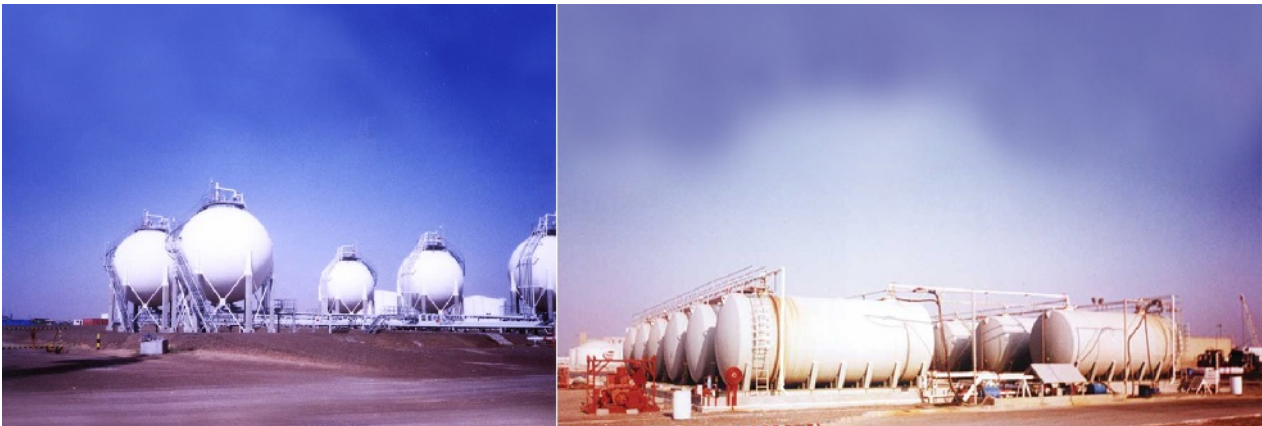
THERMO-SHIELD TANK SHIELD

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 resist 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 satin finish.

TYPICAL USES

For the exterior of steel petrol storage tanks and pipelines where reduction of surface temperature is desired. Exterior of steel or polymer water tanks or grain storage silos. Exterior of most chemical storage tanks – this coating is resistant to 26 different harsh chemicals including 20% hydrochloric and 25% sulphuric 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 dust, dirt, oil or grease. Minimally, surfaces must be cleaned to remove any loose or chipped paint, or any other foreign material prior to coating. Rust should be controlled with the use of rust inhibitors.

COLOR

Tinting may be achieved with Thermo-Shield® Tank Shield by the addition of universal colorants. Darker colors will give a correspondingly lower reflectivity.



PERCENT NON-VOLATILE

51.67% by volume

51.14% by weight

THEORETICAL COVERAGE (2 or more coats)

7 sq m per gallon at 300 microns DFT (75 sf/gal at 12 mills DFT) with no loss (To be applied in 2 to 3 coats.)

DRYING TIME

To set: 45 minutes

To re-coat: 12 hours

To through: 12 hours

At 24 deg C and 50% relative humidity

INSULATION

Reflectance 82% Emittance 94% Endothermic Effect® Conductance 0.05 W/mK

FLEXIBILITY

Coating maintains its properties at -50 Deg F (-45.6 Deg C) – Eliminates thermal-shock damage – maintains its strength at 400 Deg F (204.44 Deg C).

ADHESION

Excellent adhesion to steel and other substrates such as galvanized steel, aluminum, concrete, wood, urethane foam, asbestos and others.

ACCELERATED WEATHERING

ASTM G53, Q-UV 3000 no evidence of chalking, de-laminating or loss of flexibility.

RESISTANCE TO WATER PONDING

Excellent resistance to ponding water. This is a result of a careful balancing of the following properties:

Passage of bulk water at 50 hours	... 40-55 mg/m ²
Permeability (ASTM E 96-80)	... 08.80% Perms
Film Swelling (at Equilibrium)	... 10.17%

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 open pores to allow trapped water vapor to breathe out of the substrate, but when conditions are wet (raining, ponding of water, etc.), the polymers swell, close the pores, and the entire membrane becomes watertight.

SPREADING RATE PER COAT (1 millimeter = 1000 microns)

Suggested: 9 sm/gal – 371 microns WFT (15 mills) – 233 microns DFT (9 mills)

Maximum: 12 sm/gal – 275 microns WFT (11 mills) – 175 microns DFT (7 mills)

Minimum: 6 sm/gal – 567 microns WFT (22 mills) – 350 microns DFT (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 300 microns) will give the best long-term protection at minimum cost.

THINNING

None required. Clean water in small amounts (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 loose adhesion and elasticity.

EQUIPMENT

Roller or airless spray application is recommended. Very small areas may be brushed. When Tank Shield is applied by brush, three (3) coats are required for adequate protection. Airless spray: apply all coats in the same direction – do not cross spray. Cross spraying may reveal surface imperfections such as small undulation, etc.

Airless Spray:

Tip Orifice	.31 inches
Atomizing Pressure	2200 - 2500 psi
Fan Spread	0 degrees
Pump	1 gallon per minute at 2500 psi
Filter	Remove filters and screens

*** Prime pump with water before attempting to spray Thermo-Shield® Roof Coatings. (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” or the “cross spray” techniques are recommended. Thermo-Shield® Roof Coatings should be applied in full wet coats.

CLEAN UP

Clean all 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

One and five-gallon pails.

APPROXIMATE SHIPPING WEIGHT

Net weight per gallon	4.64 kg (10 lbs)
Case of 4 1-gallon cans	20.4 kg (15 lbs)
Five-gallon pail	24.13 kg (53 lbs)

STORAGE

Minimum 0 Deg. C Maximum 30 Deg. C (32 Deg F – 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

STD WHITE: 5962 – STD ACCENT BASE: 5965 – TROPICAL WHITE: 5966 – TROPICAL ACCENT
BASE: 5967 – UL CLASS A: 5975

WARRANTY

5 to 10 year extendable LIMITED WARRANTY

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

Thermo-Shield® is a charter member of the U.S. Government Energy Star Roof Program.

Thermo-Shield® is a trademark of SPM Thermo-Shield since 1987 in the US and across many countries. Thermo-Shield is currently under trademark process in the UAE.