



THERMO-SIL™ NP

TECHNICAL DATA SHEET

High Solids Silicone Roof Coating

Product Use and Design

Thermo-Sil NP™ High Solids Silicone Roof Coating is a single component, moisture curing silicone rubber roof coating system designed for use on existing smooth surface BUR, granulated cap sheet, well-adhered acrylic coating, concrete, metal, sprayed-in-place polyurethane foam and various single-ply membrane roofing.

The controlled flow properties of the coating allow a continuous, even film to be applied even on rough surfaces. Once cured, the Thermo-Sil NP High Solids Silicone Roof Coating forms a tough, flexible membrane that is integral with the structure itself and is designed to withstand the damp heat and ultra-violet rays of humid environments. Primer may be required.

Product Characteristics		
Standard Colors:	WHITE	
Cool Roof Rating Council (CRRC) Product ID:CRRC ID:	(White) - 0770 0010	
Radiative Properties: (3200 White)	Solar Reflectance - Initial:	0.88
	Thermal Emittance - Initial:	0.90
Solar Reflective Index:	SRI - Initial:	111
	SRI - Aged:	103
Cure Time:	1-4 hours	
Tack Free Time:	40-60 minutes	
Recoat Window:	2-4 hours	

Application Equipment

Due to the high viscosity of the material, a high-pressure airless sprayer capable of producing a minimum of 3300 PSI at the spray gun head should be used. The pump should have a minimum of 2.2 gallons per minute output rate. Always use components rated for pump pressure. Hoses should be BUNA-N jacketed for prevention of moisture contamination. Hoses should have a minimum I.D. of 3/4" and an adequate working pressure. The spray gun should be high pressure (5000 PSI) with reverse-a-clean spray tip, having a minimum orifice of .030 and a 50° fan tip. Thinning of this material is not recommended. For question regarding thinning to this material please contact an Huntsman Building Solutions Sales Representative or Technical Services for additional information.

Contact Huntsman Building Solutions Technical Service personnel for specific recommendations, pricing and availability of spray and auxiliary equipment.

Processing Parameters

Thermo-Sil NP High Solids Silicone Roof Coating should be stored in sealed containers in a dry area, out of direct sunlight and high heat. Do not open containers until ready for use and store containers at or below 109°F (43°C) to maintain full shelf life. Thermo-Sil NP High Solids Silicone Roof Coating generally can be stored in unheated warehouses during the cooler months without the risk of freezing.

Thermo-Sil NP High Solids Silicone Roof Coating reacts with atmospheric moisture to cure. Once containers are open and exposed to the atmosphere, a skin will form on the material over time. The formation of skin will be negligible in winter months but can form quickly (minutes) under hot and humid conditions. Cured skin that has formed on the top of the material must be removed or screened from the bulk material, as it may contribute to pump clogging. Take appropriate precautions to cover open containers during use.

Physical Properties		
Properties	Test Method/Requirements	Value
Tensile Strength:	ASTM D 2370	204 psi (±25)
Elongation:	ASTM D 2370	348% (±10)
Hardness (Shore A):	ASTM D 2240	36 (±2)
Permeability:	ASTM E-96	9.3 Perms
Solids by Volume:	ASTM D 2697	92% (±3)
Weight per Gallon:	ASTM D1475	10.85 (±.2)
Theoretical Coverage:	21 dry mils	1.5 gallon
Volatile Organic Compounds:		< 24 grams per liter
Flash Point:		141°F

Credentials

- Underwriters Laboratories Inc. (UL 790) Rated
- Cool Roof Rating Council (CRRC) Rated - Pending
- Miami Dade NOA - Pending

Surface Preparation & Priming

Apply Thermo-Sil NP High Solids Silicone Roof Coating only to clean, dry, sound surfaces, free of loose particles or other foreign matter. Apply only to roofs that have adequate positive drainage (i.e. a minimum slope of 1/8 inch per foot). This product is not intended for areas where ponding water might occur.

Product Application

Thermo-Sil NP High Solids Silicone Roof Coating may be applied by medium nap rollers, brushes, or by conventional or airless spray equipment. Airless spray application is most efficient whereas rolling or brushing may be best for touch-up, flashing and edge terminations or to fill voids, pinholes, holidays or cracks.

Apply at a minimum application rate of 1.5 gallons per 100 square feet. Maximum application rate not to exceed 2 gallons. Granules may be broad-cast into the final coating application at a rate of 35 – 40 pounds per 100 square feet. No foot traffic shall be permitted on the finished coated surface for 24 - 72 hours depending on curing conditions after application.

Product Handling:

Some separation may occur during shipment and storage, stir or shake material prior to application. Product should never be thinned or diluted with a solvent.

Maintenance:

The life of the roof may be extended by regularly scheduled maintenance. A roof should typically be inspected at least twice a year. The roof immediately needs to be inspected following severe weather and extraordinary maintenance on roof-mounted equipment.

Clean Up:

Cleanup of spray equipment containing uncured material may be accomplished by flushing with mineral spirits or toluene. DO NOT USE water or alcohol based solvents. Thermo-Sil NP High Solids Silicone Roof Coating cures by reacting with moisture, thus it should not be left in pumping equipment and hoses for prolonged periods unless equipment contains moisture lock hoses, fittings and seals. Equipment without moisture lock hoses, fittings and seals may transmit sufficient moisture vapor to gradually form cured material on hose walls and at unsealed connections. This can cause increased operating pressures and flow restriction.

Care should be taken to avoid overspray onto adjacent building materials, vehicles, plants, etc. Overspray can be cleaned up before it has cured by wiping alternately with solvent and dry rags. Cured material can be removed from surfaces with a razor blade, or scrubbed off with steel wool or synthetic abrasive pads and solvent. To control overspray, avoid spraying in winds that may cause drift. Surfaces not intended for coating should be masked or covered.

Limitations and Precautions:

Do not apply over wet substrates or when inclement weather is imminent. Total cure of Thermo-Sil NP High Solids Silicone Roof Coating requires complete evaporation of carrier. Cool temperatures and high humidity retard cure. Do not apply if climatic conditions prevent complete cure before rain, dew, or freezing temperatures. Thermo-Sil NP High Solids Silicone Roof Coating is not a vapor barrier coating and not recommended for use over most cold storage installations. Where a vapor barrier is required, contact Huntsman Building Solutions Technical Service Personnel for proper selection and installation procedures.

SHELF LIFE: 24 months from manufactured date when stored properly.

Packaging

U.S. MEASURES: 5.0 Gallon Pails, 50 Gallon Drums & 250-gal. totes.

WEIGHT PER U.S. GALLON: 11.65 lbs.

General Health & Safety Precautions

This product is intended for use by trained professional personnel. Safety Data Sheets are available and any individual who may come in contact with these products should read and understand the S.D.S. In case of emergency contact **CHEMTREC EMERGENCY NUMBER at 800-424-9300**.

WARNING: Avoid eye contact with the liquid or spray mist. Applicators should wear protective clothing, gloves and use protective equipment on face, hands and other exposed areas.

EYE PROTECTION: Safety glasses, goggles, or a face shield are recommended.

SKIN PROTECTION: Chemical resistant gloves are recommended. Cover as much of the exposed skin area as possible with appropriate clothing.

RESPIRATORY PROTECTION is MANDATORY! Respiratory protective equipment, impervious foot wear and protective clothing are required at all times during spray application. Contact Huntsman Building Solutions for a copy of the Respiratory Protection Program developed by OSHA.

INGESTION: Do not take internally. Consider the application and environmental concentrations in deciding if additional protective measures are necessary.

DISCLAIMERS

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