TN-SI40

SILICONE ROOF COATING

PRODUCT CODE: PTEN2526-C

PRODUCT DESCRIPTION

The **TN-SI40** silicone roof coating is a high-performance protective barrier for a variety of architectural surfaces and roofing substrates. Upon curing, the **TN-SI40** coating forms a monolithic, durable, and breathable waterproofing membrane that is highly resistant to degradation from ultraviolet (UV) and infrared (IR) radiation, as well as weathering.

KEY FEATURES AND TYPICAL BENEFITS

- **Silicone Durability:** Cured silicone rubber exhibits excellent long-term resistance to natural wear and tear, including extreme temperatures, ultraviolet radiation, rain, and snow.
- **VOC Compliance:** It features a solvent-free formulation. The VOC (Volatile Organic Compounds) content is well below current limits set by Air Quality Management Districts.
- **Ease of Use:** The TN-SI40 silicone roof coating is a single-component material that requires no mixing or separate additional components.
- **Application Versatility:** TN-SI40 can be applied using high-pressure spray equipment, a roller, or a brush.
- **High-Build Formulation:** It allows for single-coat application and adheres to slopes without running or sagging**.**
- **Storage and Shelf Life:** The TN-SI40 silicone roof coating can be stored in unheated warehouses during the colder months without risk of freezing. The shelf life is 24 months from the date of manufacture when stored properly.

POTENTIAL APPLICATIONS

For structurally sound roofing applications, including over existing roof coverings, single-ply membranes, modified bitumen, and built-up roofs (BUR), spray-applied polyurethane foam, low- or steep-slope metal, and other horizontal and vertical substrates. All substrates require an adhesion test.

SURFACE PREPARATION

The TN-SI40 silicone roof coating can be applied over itself, as well as over a variety of roofing materials and substrates, including: single-ply membranes (TPO, PVC, EPDM, CSPE), spray-applied polyurethane foam (SPF), metal, concrete, common parapet/coping materials, and asphalt substrates such as modified bitumen (granulated or smooth) or built-up roofing (BUR).

Surface Requirements: Surfaces onto which the TN-SI40 silicone coating is to be applied must be: Clean, dry, and structurally sound. Free of loose particles, dirt, dust, oil, frost, mold, and other contaminants.

Prior Repairs: Any damage to the underlying roofing system, such as cracks, openings, holes, etc., must be properly repaired prior to application. Saturated substrates must be removed and repaired appropriately.

Adhesion Test: Users of the TN-SI40 silicone coating must verify that adequate adhesion can be achieved on all existing roofing materials to be coated before proceeding with large-scale application of the coating.

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APPLICATION GUIDES

TN-SI40 silicone roof coating should be applied as received; dilution with solvents is not recommended. If sediment is observed in the container, gently shake the material just before use.

Cleaning and Maintenance

Uncured material: TN-SI40 can be cleaned before it cures by alternately wiping with solvent and dry cloths.

Cured material: It can be removed from surfaces with a razor blade or by scrubbing with steel wool or synthetic abrasive pads and solvent.

Application and Environmental Control

Drift Prevention: To control overspray, avoid applying in winds that could cause the material to drift.

Protection of Adjacent Areas: Care must be taken to prevent overspray from landing on adjacent building materials, vehicles, plants, etc. Surfaces not intended to be coated must be masked or covered.

Instructions for Use **TN-SI40** silicone coating should be applied by spraying or rolling, ensuring uniform thickness and complete coverage. It can be applied in a single coat.

Note on Multiple Coats: If applying multiple coats, allow sufficient time between each coat for the coating to cure before applying the next coat. Upon completion, the cured film must be completely free of holes, pores, cracks, or bubbles.

LIMITACIONES

The **TN-SI40** silicone roof coating should not be considered for:

- Use on pedestrian surfaces, decks, or surfaces subject to frequent traffic.
- Roofing applications in cold storage rooms without a vapor barrier, applications on cryogenic tanks, or continuous immersion in water.
- Unprepared surfaces, including, but not limited to, those that are wet, dusty, oily, moldy, excessively chalky, blistered, or structurally unstable.
- Building materials that may absorb oils or solvents. This includes, but is not limited to, certain vulcanized rubber products, tapes, failed sealants, some caulking compounds, and asphaltic/mastic materials, unless proper surface preparation or primers are used. Consult GRUPO PIC's technical services for priming recommendations.
- Surfaces where adhesion has not been verified through testing.
- Harsh weather conditions can adversely affect uncured TN-SI40 coating by displacing the fresh material; therefore, the coating should not be applied if heavy rain, hail, or snow is imminent or expected within 1 hour after application. Note: At colder temperatures, 1 hour may not be sufficient time to form a firm film and become tack-free.
- The TN-SI40 coating requires atmospheric moisture to aid in its curing. It is not suitable for use in unventilated spaces.

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PHYSICAL PROPERTIES

The typical values for the physical properties of the TN-SI40 silicone roofing coating, both as supplied and after curing, are detailed in the tables below:

Property PNG	Value PNG	Test Method PNG
Volume Solids	90	ASTM D1644-01
Tack-Free Time	20-30 minutes	ASTM D3960
Skin-Over Time	10-15 minutes	WPSTM C-560
Viscosity	22,000 centipoise	ASTM D2196
Tensile Strength	204 psi (1.41 MPa)	ASTM D2370
Elongation	540%	ASTM D2370
Shore A Durometer Hardness	36	ASTM D2240
Total Volatile Organic Compounds (TVOC)	<24 g/L	EPA Method 24
Initial Solar Reflectance	88%	ASTM C1549
Initial Emittance	0.90	ASTM C1371
Initial Solar Reflectance Index (SRI)	111	ASTM E1980
Aged Solar Reflectance	55%	ASTM C1549
Aged Emittance	0.89	ASTM C1371
Aged SRI	65	ASTM E1980
Permeance	9.3 perms	ASTM E96 (BW)
Tear Resistance	32 lbf/in.	ASTM D624
Low-Temperature Flexibility	Pass	ASTM D522 (B)
Wind-Driven Rain Resistance	Pass	TT-C-555B

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COLORS

Available in white and medium gray.

STORAGE

Store in sealed containers in a dry area, away from direct sunlight and intense heat. Do not open the containers until you are ready to use them, and store at a temperature of 32°C (90°F) or lower to maintain their full shelf life.
It can be stored in unheated warehouses during the cold months without risk of freezing.
The TN-SI40 silicone coating reacts with atmospheric moisture to cure. Once the containers are opened and exposed to air, a film (skin) will form on the material over time. The formation of this film will be minimal during the winter months, but it can form rapidly (within minutes) under hot and humid conditions. Any cured film that has formed on the surface of the material should be removed or filtered out from the rest of the product, as it can contribute to pump clogging. Take appropriate precautions to cover open containers during use.

APPLICATION ON VERTICAL SURFACES

When coating vertical wall surfaces—other than parapets or walls associated with the roofing system—we recommend using the **TN-SI40** architectural silicone coating.

APPLICABLE REGULATIONS

ASTM D6694—Standard Specification for Liquid-Applied Silicone Coatings Used in Sprayed Polyurethane Foam Roofing Systems. Result: Passed.
Cool Roof Rating Council (CRRC)—For TN-SI40 (White and Gray) only.
UL 790—Flammability Characteristics: The TN-SI40 silicone roof coating has Class “A” and Class “B” ratings based on tests conducted under UL 790 procedures.
ASTM E84—Standard Test Method for Surface Combustion Characteristics of Building Materials. Result: Class A (Flame Spread Index: 10, Smoke Development Index: 185).
Approved by Miami-Dade. Florida Product Approval. FM Global.
NSF P151—The TN-SI40 roofing membrane in White and Medium Gray is certified under NSF P151. UL FDQR.MH61555: Certification of components for rainwater harvesting, also known as a rainwater collection system.

PRODUCT SAFETY, HANDLING, AND STORAGE

Customers should review the most recent Safety Data Sheet (SDS) and the label for information on product safety, safe handling instructions, personal protective equipment (if necessary), emergency contact information, and any special storage conditions required for their safety.

GRUPO PIC maintains a 24-hour service to provide product information. Safety Data Sheets (SDS) are available at www.picgrupo.com or, upon request, through any GRUPO PIC representative.

To learn about the storage and handling procedures that ensure product quality remains within our established specifications, please review the Certificates of Analysis, available in the Order Center.

The use of other materials in conjunction with TEN products (e.g., printers) may require additional precautions. Please review and follow the safety information provided by the manufacturer of those materials.