NEYRA® *Professional Grade*

SunShield

Solar Reflective Coating

1. PRODUCT NAME
SunShield™

2. MANUFACTURER
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- **LEED Green Building Compliant:** SunShield is formulated to meet LEED "High Albedo Coatings" solar reflectance requirements.
- **High Performance:** Premium polymers and virgin aggregate create a tough and flexible coating. SunShield lasts up to five times longer than conventional emulsion pavement sealers.
- **Sustainable:** SunShield keeps the pavement cooler, prolonging its life.
- **Non-Fading:** Pure inorganic reflective pigments provide rich, long-lasting color for years of service.
- **Buyer Protection Warranty:** Neyra Industries and our national network of licensed contractors provide a 2-year dual warranty.

3. PRODUCT DESCRIPTION

SunShield solar protective coating is a premium quality, highly pigmented, polymeric surfacing system designed for heat reduction of parking surfaces. The product is formulated with infrared reflective pigments to reduce solar absorptance, increase reflectance and achieve the desired solar reflectance index (SRI). SunShield binds specifically graded subangular aggregate for non-slip performance and to achieve a diffuse reflective surface. SunShield contains no PAHs and has an extremely low VOC content.

Packaging:

Bulk shipments are made in tank trucks. Also available in 5 gal. pails and 55 gal. steel drums. 185 gal. totes available as a special order.

Color:

The standard color is LEED gray. Custom colors are also available.

Basic Uses:

SunShield provides long wearing, non-fading color and texture to asphalt and concrete pavements including parking lots and walkways. SunShield standard gray meets the LEED-EB Heat Island Reduction: Non-Roof, Option B - Light Color, High Albedo Materials requirements for green buildings.

Composition:

SunShield solar protective coating is a blend of binders, pigments, surfactants and aggregate in a water based emulsion. Premium quality polymers give SunShield its tough, long wearing character.

SunShield contains pure, high grade reflective mineral oxide pigments that have been tested for color stability and resistance to ultraviolet light.

The surfactants blended into SunShield create a superior bond between the product and the pavement surface.

The specifically graded aggregate loading in SunShield increases the durability and the non-skid and heat diffusing qualities.

Limitations:

In the liquid state, SunShield must be protected from freezing and rain. Do not store in direct sunlight or where temperature exceeds 120˚F.

4. INSTALLATION

Preparatory Work:

The surface must be structurally sound, cured and free from all loose or foreign matter prior to the application of SunShield.

On a concrete surface,the finish should be wood float or light broom, not steel troweled.

In addition, new concrete surfaces should be lightly abraded or acid-etched and then primed with Polyprime (Product Data Sheet 155) prior to the application of SunShield. ***Note:*** *In all cases a vapor barrier beneath concrete surface is strongly recommended.*

Methods:

SunShield can be applied by spray, rubber-bladed squeegee, brush or mechanical equipment specifically designed for this purpose. Due to the heavy bodied nature of the slurry-mixed SunShield, application by means of specialized equipment is recommended. This equipment can be of two types, high volume positive displacement airless spray or mechanical squeegee. Both types must be capable of keeping material thoroughly mixed and homogenous throughout the application process. All equipment used must be capable of supplying a sufficient quantity of material for uniform application over the entire width of the application mechanism to provide a uniformly coated surface.

Mix Design:

Mix well before use and apply at full strength. A maximum of 10% dilution with water may be required when the ambient temperature is above 85˚F.

Application:

For use over sound asphalt pavement, the following application procedures are recommended for best results:

One gallon of SunShield will cover 90 square feet. Multiply square yards of surface x .10 to determine gallons of SunShield per coat.

Coverage rates can vary with the application method and the age, texture and porosity of the pavement to be coated. For low to moderate traffic areas, we recommend applying two full coats. For high traffic areas, a third coat is advised. A primer, Polyprime (Product Data Sheet 155) is required prior to application of SunShield. Each coat must be dry before additional applications. On a typical parking lot, a combination of application systems could be used. For example, two coats for the parking stalls and a third for the drive lanes where most of the wear occurs.

Application must be made when ambient temperatures and pavement temperatures are above 50˚F. Good drying conditions above 50˚F are required during the subsequent 8 hours and no temperatures below 50˚F should be anticipated for 48 hours. Night time application is not recommended. It is recommended that the area over which the application is made be opened to use only after trial shows it to be dried and sufficiently cured to accept regular traffic. Lower temperatures, high humidity, clouds or shade, and lack of air movement retard cure.

Precautions:

Wet SunShield must be protected at all times from freezing. Keep out of reach of children. Container should be closed when not in use. Avoid breathing vapor or contact with skin or eyes. Consult specific Neyra material safety data sheet before use.

New asphalt should be allowed to cure for a minimum of 15 days prior to application and must not exhibit ribboning, crawling, nor show oil rings when 1 gal. of clean water is poured onto the surface.

New concrete pavement should be allowed to cure for a minimum of 30 days prior to application. SunShield cannot be used on concrete that has been sealed with silicone or which contains concrete curing compound.

5. MAINTENANCE

As a rule, a clean, well-marked parking lot is safer and will last longer. Occasional flushing with water or the use of a contract cleaning service will help to retain an attractive appearance.

6. TECHNICAL DATA

Applicable Standards:

SunShield in standard gray meets LEED-EB Heat Island Reduction: Non-Roof Option B High Albedo Coatings" when tested according to the following ASTM methods:

C1371 *Determination of Emittance of Materials near Room Temperature Using Portable Emissometers.*

E903 *Solar Absorptance, Reflectance & Transmittance of Materials Using Integrating Spheres.*

E1980 *Caluculating Solar Reflectance Index of Horizontal and Low Sloped Opaque Surfaces.*

SunShield also meets the composition and performance standards of ASTM D2833, Architectural Paints and Coatings, when tested according to the following ASTM methods:

Drying Time:

When tested according to ASTM D1640, "set to touch" in 1 hour, dry to touch in 4 hours.

Resistance to Kerosene:

The cured coating exhibits no penetration or loss of adhesion after 24 hour immersion.

Adhesion:

When tested according to ASTM D3359 A, the dried film exhibits no loss of adhesion from the substrate.

Flexibility:

When tested according to ASTM D522 B, the dried film exhibits no loss of adhesion.

Resistance to Water:

When tested according to ASTM D870, the dried film exhibits no blistering, re-emulsification or color change.

Chalking:

When tested according to ASTM D4214, the dried film exhibits no chalking or friable powder development.

Fading:

When tested according to ASTM D4587, the dried film exhibits no fading or color loss.

Environmental Considerations:

SunShield contains no PAHs and is non-hazardous when tested according to the EPA's TCLP (Toxicity Characteristic Leaching Procedure). SunShield is a water based material containing less than 98 g/L (.82 lbs./gal.) VOC content.

7. TECHNICAL SERVICES

C.S.I. formatted application specifications, material safety data sheets, special project submittals, product and application recommendations as well as assistance with special situations and field service are available.

8. WARRANTY

The above specifications on product usage are believed to be true and accurate. Neyra Industries, Inc. guarantees that all materials manufactured comply with quality standards as described in the product data sheets. Because the application, handling, weather, workmanship and equipment are beyond the control of this manufacturer, only the quality of the products as shipped is guaranteed. In no case will the liability of Neyra Industries, Inc. exceed the purchase price of the shipped materials.

9. ADDITIONAL INFORMATION

Neyra Industries, Inc. manufactures a full line of asphalt pavement maintenance and recreational surface products as well as application equipment sold and distributed nationally at our plants and through distributors and contractors. To find the supplier most convenient to you, please contact us.

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