

**TECHNICAL DATASHEET**  
**Orbit Coatings Nano Shield**  
**Hybrid Acrylic based elastomeric, solar heat reflective coating,**

**Orbit Coatings Nano shield** is a single component, hybrid acrylic elastomeric, solar heat reflective coating with high SRI value for cool roof waterproofing coating with advanced nano carbon fiber technology coating. It offers high solar reflectivity and thermal emittance which significantly reduces the roof temperature even in the extreme weather conditions. Orbit Coatings Nano shield works as a waterproof and cool roof coating technology principle. Its high SRI value ensures that it reflects the maximum amount of heat. Its unique formulation forms a strong chemical bond with the surface and offers complete protection with a promise to keep the building cool. A high SRI value of a coating indicates a high degree of cooling effect by acting as a shield for the roof allowing minimal solar penetration into the roof hence helping in saving energy.

**Features / Advantages**

- Lower Indoor Temperature
- Reduced roof temperature.
- High solar reflectance index (SRI) indicates a high degree of cooling effect Ultraviolet rays and weather-resistant
- Save on electricity bills by decreasing air conditioning needs.
- Improve indoor work comforts and worker productivity.
- Extends the life of a roof
- Save on roof maintenance cost
- Increase cooling efficiency of buildings
- Crack-bridging property
- Algae and fungi resistant
- Simple and fast application
- Help in Reduction of Roofing Wastes in Landfills
- Decrease CO2 emission
- Reduce “Urban Heat Island” effects
- Eco friendly

**Recommended Use**

For application on various roofs- RCC, concrete, stone, Marble, Brick, wood, tiles, glass, GI roof, tin, metal roofs, and Bituminous roof types.

Residential Buildings - Terrace/roof, Sheds-Industrial Roofs- Airports, Hospitals, Schools, Dormitories, Hotels, Clubhouse Warehouses and Cold Storages, Factories, Offices, Indoor Sports Stadium, Containers, Cold Transport Vehicles, Buses

**Technical Data**

- Solids by Volume; 40%
- Density:1.01kg/l@25oC
- Elongation at break :>200% ASTMD412
- Tensile Strength:2MP ASTMD412
- Accelerated Weathering 1000hours: Pass-Noncracking, chockingASTM-D4364
- Wet Film Thickness: 150 micron per coat
- Dry Film Thickness: 250-micron 2 coats
- Adhesion to Peel: Dry adhesion 2MPa ASTM C794



## Orbit Coatings Nano shield

- Wet adhesion :>1MPa ASTM C794, D-903
- VOC :<10g/L ASTM D2369
- Crack Bridging Ability: passes up to 3mm width ASTM C1305
- Low Temp Flexibility (Initial): Passes ASTM D522
- Low Temp Flexibility (After 1,000 hours aging): Passes -1½ inch mandrel bend at 10°C ASTM D522
- Flash Point: Non-Flammable
- Water Absorption :<10% ASTM D1653
- Water Vapor Permeance :<20g/m<sup>2</sup>/24hr ASTM D471
- Fungal resistance: Pass-no fungal growth ASTM G21
- Application Temperature: -10-40 Deg C
- Coverage Liter/M<sup>2</sup>/Thick/No.of coats: 2 to 3 Sqm/ltr at 250micron DFT each coat (two coats recommended)
- Solar Reflectance: 0.8765 EN673-2011 EN410-2011
- Thermal Emittance 0.861 EN12898-2019
- SRI Solar Reflectance Index\* :110 ASTM E1980-19

## Surface Preparation

Clean and wash the surface thoroughly to get rid of any foreign material from the roof surface like cement, old paint, sand, dust particles, etc.

**Mixing:** Stir thoroughly with a low-speed stirrer. How

**Application:** Choose a bright sunny day. Apply the 1st coat using a Roller/Brush/Spray. Leave it to dry for 5-6 hours. Apply the second coat in a perpendicular way to the 1st coat and leave it to dry. Allow 24 hours of complete drying.

**Clean-up:** Before the coating gets dry, clean hand tools, spillage, etc., with warm soapy water. If the coating has dried, clean your hands with a waterless hand cleaner. Soften the dried film on tools with mineral spirits, then scrape clean. When using mineral spirits, exercise safe practices concerning flammability and toxicity.

Clean the surfaces from dirt, dust, moss, and lichen. Use a high-pressure washer to avoid damaging the substrate and structures.

**Shelf-Life Storage:** 24 months if stored properly in the unopened original sealed or undamaged pack. Store in cool and dry conditions.

## Environmental protection and waste disposal

Avoid spillage into drains, water systems, and soil. Destroy liquid waste according to the local regulations for hazardous waste.

Recycle empty, dry cans or dispose them of in accordance with local regulations.

**Warranty:** The technical data furnished herein is based upon data believed by Orbit Coatings to be true and accurate at the time of writing, however, no guarantee of accuracy is given or implied and is subject to change without notice. This information is given in good faith for the assistance of users. No legal warranty expressed or implied is made as to its accuracy, completeness or otherwise. Every person dealing with this material herein does so at their own risk absolutely and must make independent determinations of suitability and completeness from all sources to ensure their proper use. We have no control over the condition under which these products are stored, handled, or used; therefore, our recommendations must not be regarded as a mounting to legal warranty

