

Description:

TechnoFlex® WPU 1K is a single-component highly elastomeric white coloured non-flammable aliphatic polyurethane modified waterproof coating comprising of modified polyurethane & specially developed and designed hollow "microspheres", less than 100 microns in diameter with nonconductive properties. These microspheres collectively acts as thermal insulation blanket covering the structure effectively reflecting solar radiation back into the atmosphere. This results in impressive temperature reduction behind the substrate in air-conditioned areas an attractive power saving of up to 20% can be noted during peak summer.

TechnoFlex® WPU 1K provides excellent insulation protection and is a very effective weather barrier for many types of commercial and industrial applications, as well as insulation and roofing materials. TechnoFlex® WPU 1K provides excellent UV protection. It exhibits superior adhesion to many substrates and has a high hide capability to create an aesthetically pleasing appearance. TechnoFlex® WPU 1K provides highly efficient insulation performance over multiple years thereby reducing maintenance and total lifecycle costs while delivering maximum ROI in energy savings.

Application:

- Roofs & Terrace of Buildings
- Asbestos, GI sheet and other metal surfaces
- External and internal walls
- Corrosion Under Insulation (CUI)
- Commercial Buildings Sheds
- Weather resistant membrane
- Wood, Concrete & concrete roofs.
- Air-Conditioned Building
- Wood, tiles, PU foams and asphalt shingles.
- Fabric embedded membrane
- Refrigerated Cold storage Facilities
- Walking decks & balconies
- Stair ways & pool area
- Green Buildings

Features & Benefits:

- Enhances durability of the roof and reduces both building cooling loads & the urban heat island effect.
- Effective alternative to bulk insulations under the roofs in humid tropical climates. Bulk insulation can be to an extent replaced by TechnoFlex® WPU 1K that reflect solar radiation and provide emission to the sky.
- Excellent abrasion and water resistance.
- It is also resistant to fungal growth.
- Recommended for reduction in the "carbon foot print" of building as it reduces fuel consumption of the air-conditioning plant.
- Reduction of roof heat about 8°C to 14°C

Method of Application:

Surface Preparation:

The surface to be coated with TechnoFlex® WPU 1K must be free of oil, grease, wax, dirt, or any other foreign matter that may affect adhesion. It is recommended to remove spalled and deeply disintegrated concrete and repair it with the TechFin® system. In order to ensure proper mechanical keying, the metal surface must be thoroughly abraded. All application areas should be cleaned with a hard brush in order to remove dust, weak points, fungi, etc. Water and Bleaching Powder should be used to wash the cleaned area.

Priming:

Priming is not required on metallic and non-porous surfaces. On highly porous cementitious surfaces, apply a coat of TechnoSeal® FlexiPrime using a clean roller/brush and allow the surface to dry for at least 2-3 hours, prior to TechnoFlex® WPU 1K application.

Mixing:

Stir product to an even smooth consistency before use.

Typical Properties at 23°C & 50% RH:

Appearance	White coloured, pasty consistency
Bulk Density	Approx. 1.25kg/litre
Solid Content	Approx. 60% by weight
Ultimate Elongation	> 300%
Ultimate Tensile Strength	> 4 Mpa
Adhesion Strength	> 2.5N/mm ²
Shore A Hardness	> 60
Drying Time	24 hours depending on temperature and RH
Full cure	7 days @ 23°C 5 days @ 40°C
Application & Service Temperature	5°C to 50°C
Solar Reflectance ASTM C1549	.92 Initial
Thermal Emittance	.87 Initial
SRI Calculated	122

Design Criteria:

TechnoFlex® WPU 1K should be applied in two coats to achieve a total dry film thickness of not less than 1000 microns.

Packaging:

TechnoFlex® WPU 1K is supplied in 10 kg, 20 kg & 25 kg drums.

Shelf Life & Storage:

12 months from the date of manufacturing when stored in unopened, original sealed and dry condition at a temperature range from +10°C to 30°C.

Coverage:

- This depends on the roughness & porosity of the substrate.
- The approximate coverage on concrete: (1.5-2.0) kg/m² in 2 coats. DFT@1mm to 1.3mm.
- Steel: 2-2.5 m² /2coats/Kg.
- A minimum of 2 coats is recommended for effective performance. Allowances should be made for any possible wastages when estimating.

Limitations:

TechnoFlex® WPU 1K is formulated for application to clean sound concrete, aluminium or galvanized steel. Where application over existing sound coatings or paints is required trials should be conducted to ensure compatibility and retention of the bond between the underlying coating and the substrate. TechnoFlex® WPU 1K should not be applied where there is a likelihood of exposure to frost within 48 hours of the application. The product should not be applied in windy conditions where early-age dust adhesion may occur, or where rain is likely within 3 hours at 23°C or 5 hours at 40°C (up to 75% RH).

Health & Safety Instructions:

TechnoFlex® WPU 1K should not come in contact with the skin and eyes, or be swallowed. Wear suitable protective clothing, gloves and eye protection. The use of barrier creams provide additional skin protection. In case of contact with skin, rinse with plenty of clean water, then cleanse with soap and water. Do not use solvent. In case of contact with eyes, rinse immediately with plenty of clean water and seek medical advice. If swallowed, seek medical attention immediately- do not induce vomiting. Protect your health while working with this material, always use safety goggles, gloves and safety clothing. When handling hazardous materials or pressurized materials, or during any application that may result in spills, splashes or airborne particles, a full face shield is strongly recommended. Protect yourself and others on the jobsite.

Consider property in proximity of the application area to prevent loss or damage. Protect your jobsite from unauthorized persons. Store all materials and equipment safely and out of reach of children and animals.

Observe container labels, SDS, applicable laws and regulations and all instructions before using the product and equipment. In case one of the components comes in contact with the skin, wash thoroughly with soap and water. Provide adequate ventilation in volume and pattern in working area.

Additional Information:

Techno Builders Solutions® By Sterling Technotrade India Pvt.Ltd -The Specialist Construction Chemicals Company® range of associated products includes high performance concrete Admixtures, Adhesives, Protective Coatings, Concrete Repairs, Industrial Flooring, Grouts & Anchors, Joint Sealants, Surface Treatments, curing compounds, repair mortars, release agents, Grinding Aids & Waterproofing.

*Separate datasheet are available on these products.

DISCLAIMER: The product information & application details given by the company & its agents has been provided in good faith & meant to serve only as a general guideline during usage. Users are advised to carry out tests & take trials to ensure on the suitability of products meeting their requirement prior to full scale usage of our products. Since the correct identification of the problems, quality of other materials used and the on-site workmanship are factors beyond our control, there are no expressed or implied guarantee / warranty as to the results obtained. The company does not assume any liability or consequential damage for unsatisfactory results, arising from the use of our products.

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