GRACE FLEXI PU COATING

Single-component, elastomeric, UV-resistant and heat-reflective waterproofing coating for climate-resilient roofs and exposed surfaces.

Product Positioning	Grace Flexi PU Coating is a liquid-applied, polyurethane-based waterproofing coating that cures to form a seamless, elastic protective membrane. It is designed for exposed roof areas, wet areas and selected concrete or steel substrates requiring waterproofing, weather resistance and flexibility. In white or other light colours, the exposed finish helps reduce solar heat absorption and supports a cooler roof surface.

Why It Is Suited for Exposed Roofs

- Seamless waterproofing: forms a continuous protective barrier that helps prevent rainwater penetration.
- Elastomeric movement accommodation: maintains flexibility to help bridge hairline cracks and normal thermal movement.
- UV and weather resistance: intended for external exposure where sunlight, rain, humidity and day-to-night temperature cycling are present.
- Heat-reflective roof finish: white and light-coloured finishes help limit solar heat absorption. This is a cool-roof benefit, not a substitute for thermal insulation.
- Easy application: can be applied by brush, roller or airless spray in accordance with the approved method statement.

Recommended Climate-Resilient Roof System

1. Surface correction and drainage
Repair cracks, voids and weak screed. Ensure adequate falls, drain outlets and no persistent ponding before coating.
2. Joint and detail treatment
Seal joints, cracks, pipe penetrations, outlets and parapet junctions with a compatible PU sealant. Reinforce critical interfaces with suitable fiberglass mesh or polyester fleece.
3. Primer / scratch coat
Apply the recommended primer or a 20% water-diluted scratch coat where suitable for the substrate and project requirements.
4. Main waterproofing coats
Apply two uniform coats of Grace Flexi PU Coating. Reinforce corners, joints and movement-prone details as required.
5. Exposed cool-roof finish
For maximum heat-reflective effect, specify white or a light colour for the final exposed coat. Keep the roof clean to maintain the reflective surface.

Typical Applications

Recommended: exposed roofs, non-trafficable roof slabs, balconies and terraces subject to project-specific detailing, wet areas, external concrete surfaces, metal roof and steel protection where compatibility is confirmed.

Important: for basements, foundations, permanently immersed areas, bridge decks, tanks, vehicle traffic, sports floors or heavy abrasion zones, use only as part of a separately specified system approved for that service condition.

Cool-Roof Performance Note	The heat-reflective benefit is most effective when the final coat is white or light coloured. Actual roof and indoor temperature reduction depends on colour, roof construction, film thickness, insulation, ventilation, site climate, roof cleanliness and the presence of shade or standing water.

APPLICATION GUIDANCE AND TECHNICAL DATA

Application Conditions

Apply only to a clean, dry, sound and stable substrate. Recommended ambient and substrate temperature during application and curing: 5 C to 35 C. The substrate should be at least 3 C above the measured dew point. Do not apply when rain is expected within the next 8-12 hours or when the substrate is damp, wet or frosted.

Surface Preparation

Remove dust, laitance, oils, grease, curing compounds, weak previous coatings, waxes and other contaminants. Dress off sharp projections and rough patches. Concrete should present a clean, open-textured profile produced by suitable mechanical preparation. Repair cracks, voids and surface defects before coating.

Priming and Detailing

Use a suitable Grace adhesion promoter / primer where substrate porosity or project conditions require it. Where approved, the first coat may be applied as a scratch coat with approximately 20% clean-water dilution. Do not dilute with solvents. Seal all construction joints and penetrations, and reinforce critical locations with compatible mesh or fleece.

Application Method

Apply by brush, roller or spray. Apply the first coat evenly, allow it to dry, then apply the second coat at right angles to the first where practical. Build up the required film uniformly and avoid pinholes, thin spots and uncoated edges. Check roof outlets, parapet junctions, pipe penetrations and other details before handing over.

Coverage

First coat: 0.6-0.8 kg/m2
Second coat: 0.6-0.8 kg/m2
Total indicative consumption: 1.0-1.6 kg/m2 to achieve approximately 1 mm dry film thickness, subject to surface texture, detailing, reinforcement and required protection level.

Technical Properties

Technical Property	Typical Value
Appearance	Liquid
Colour	Customizable. Standard colours: white, gr tan. White is recommended for heat-reflec roof use.
Density	1.2-1.4 g/cm3
Solid content	80-85%
Tensile strength	> 3 MPa
Elongation at break	> 400%
Shore A hardness	60-70
UV resistance	Excellent
Chemical resistance	Excellent against common atmospheric pollutants. Confirm suitability for specific chemicals before use.
Service temperature	-40 C to 90 C
Recoat time	4-6 hours at 25 C and 50% RH
Full cure	24-48 hours, depending on temperature, humidity and film thickness

Packaging

Grace Flexi PU Coating is supplied in 5 kg, 16 kg and 20 kg pails. It is also available in 200 kg drums.

Storage and Shelf Life

Shelf life is 12 months when stored in original, unopened containers under cover, away from direct sunlight and protected from extremes of temperature and moisture. Store containers upright and reseal immediately after use.

Health and Safety

Use appropriate personal protective equipment. Avoid contact with eyes, skin and foodstuffs. Provide adequate ventilation during use. Treat splashes immediately and seek medical attention if swallowed. Refer to the latest Safety Data Sheet before handling.

LIMITATIONS, CARE AND WARRANTY

Limitations

- Do not apply on wet, damp, frosted, contaminated or structurally unsound substrates.
- Do not proceed if rain, heavy dew or adverse weather is expected within 8-12 hours of application.
- Do not apply when the substrate temperature is less than 3 C above the measured dew point or when surface moisture may interfere with adhesion and curing.
- Do not use solvents to thin the coating. Follow the approved priming and mixing guidance only.
- New concrete should generally be allowed to cure for 21-28 days, subject to drying conditions, moisture testing and project requirements.
- Correct persistent ponding, poor drainage, failed screed, cracks, open joints and defective roof details before application. A coating cannot compensate for defective falls or blocked drainage.
- The system is not intended for permanent immersion, continuous water pressure from the negative side, heavy traffic, vehicular loads or aggressive chemical exposure unless a project-specific system has been approved in writing.
- For roof insulation, insulation boards or damaged structural slabs, seek separate engineering / system-design advice. Heat-reflective coating is not a replacement for insulation.

Important Site Guidance

Field service, where provided, is advisory and does not constitute supervision of the contractor, site works or substrate preparation. The applicator remains responsible for verifying surface condition, ambient conditions, compatibility, coverage, wet-film thickness and detail execution.

Maintenance of Cool Roof Performance

Inspect the roof periodically and after severe weather. Clean accumulated dust, dirt, biological growth and debris from the white or light-coloured finish, outlets and drainage paths. Repair mechanical damage, cracks or failed sealant joints promptly to maintain waterproofing continuity and heat-reflective performance.

Limited Warranty

Grace Chemicals warrants that this product, when stored, handled and applied in accordance with the current Technical Data Sheet and within its stated shelf life, will be manufactured free from defects and will conform to its stated typical properties for a period of one year from the date of installation.

This limited warranty applies to product quality only and does not cover failures caused by incorrect substrate preparation, inadequate drainage, ponding water, structural movement, inadequate thickness, improper application, unapproved mixing or thinning, weather exposure before curing, misuse, damage by third parties, or use outside the stated limitations. The buyer must determine product suitability for the intended use before application. No other express or implied warranties are made except as stated in Grace Chemicals written warranty terms.

Technical Support

For project-specific recommendations, method statements, substrate assessment or roof detailing assistance, contact Grace Chemicals Technical Services Department before commencing the work.