PRODUCT DATASHEET

ElaProof **Cool Roof**

Easy-to-Use Sprayable or Rollable Reflective Protective Coating for Outdoor Use

Isocyanate-free ElaProof COOL ROOF is a reflective, ready-to-use, one-component technical coating with lower viscosity, applied using a high-pressure sprayer or roller. It is suitable for most surfaces, primarily for outdoor structures.

PRODUCT DESCRIPTION

ElaProof COOL ROOF is a one-component, colored technical coating based on water-based dispersion binders. ElaProof COOL ROOF has a properties which reflects the sun radiation away and keeps the roof cooler. The main applications of ElaProof COOL ROOF are the coating of structures, primarily in outdoor environments. Application areas include roofs, foundation walls, terraces, balconies, and other concrete structures. ElaProof COOL ROOF can also be used when structural details require reinforcement with ElaProof Reinforcement Fabric or ElaProof ROOF Reinforcement Fabric.

SUITABILITY

ElaProof COOL ROOF is suitable for use on the following surfaces:

- Concrete structures
- Concrete repair mortars
- Plastered surfaces
- Factory-coated steel roofs
- Galvanized roof sheets
- Bitumen membranes
- Roof tiles
- Fiber cement boards
- Wooden surfaces

TEST RESULTS / CERTIFICATIONS

- Initial CRRC testing
  - Solar Reflectance 0,82
  - Thermal Emittance 0,92
  - Initial SRI 104
- ASTM D7897-18 Standard Practice for Laboratory Soiling and Weathering of Roofing Materials to Simulate Effects of Natural Exposure on Solar Reflectance and Thermal Emittance
  - Solar Reflectance 0,69
  - Thermal Emittance 0,9
  - Aged SRI 85

FEATURES / BENEFITS

Long-lasting performance, over 30 years of proven experience

- One-component, water-based
- UV-resistant
- High elasticity
- Seamless coating
- No need for hot work during installation
- Excellent adhesion to most construction materials
- Vapor-permeable, allowing the substrate to dry through the coating
- Good chemical resistance
- Does not contain hazardous isocyanates
- Reflective coating, keeps roof cooler

PACKAGING SIZES | COLOR SHADES

- Packages: 180 L
- White (RR20 • RAL 9010)
- Other colors available upon request, whitout CRRC testing!

PRODUCT INFORMATION

Chemical Base:	One-component, water-based dispersion polymer
Shelf Life:	Minimum 12 months from the date of manufacture
Storage:	Protect from sunlight. Do not freeze
Density:	1.20 kg/l ± 0.01 kg/l (EN ISO 2811-1:2016)
Solids Content:	63 ± 1 % (ISO 3251:2008)
Flammability:	Non-flammable, no flash point
Chemical Resistance:	Separate chemical resistance chart available

TECHNICAL DATA

Adhesion Strength (without primer):	1-4 N/mm^2 (EN 1542:1999)
Tensile Strength:	2,3 N/mm^2 (ISO 527-1:1993)
Elongation at Break:	500 % (ISO 527-2 applied)
Shore A Hardness:	54 ± 4 (EN 868:2003)
Water Vapor Permeability:	18 g/m^2/day (EN 12572)
Diffusion Resistance:	S_d 2,02 m (EN12572)
Waterproofness:	Tight at +20 °C, 100 mm water column (EN 1928)
Waterproofness under Alkaline Exposure:	Tight at +70 °C, 168 days, 50 mm saturated Ca(OH)^2 solution (EN 1928)
Temperature Resistance:	Long-term -30 °C... +150 °C, short-term up to +190 °C
Electrical Conductivity:	Resistive, non-conductive

INSTALLATION INSTRUCTIONS

Application Temperature (Air):	Over +10 °C
Application Temperature (Substrate):	+10 °C...+40 °C
Substrate Moisture (Concrete):	Max. 90% RH for new concrete substrates, Max. 85% RH for old concrete
Drying Times: Note: Changes in temperature, relative humidity, and substrate absorption significantly affect drying times. Low air or substrate temperatures and high relative humidity prolong drying times. Non-absorbent, dense substrates also significantly extend drying times. The coating must be protected from rain, dew, and freezing until fully cured. Consider dew point formation during installation.	• Touch Dry (+20°C, 50% RH, 1,5 l/m^2) 3 - 4 h • Touch Dry (+6°C, 25% RH, 1,5 l/m^2) 40 h • Fully Cured (+20°C, 50% RH, 1,5 l/m^2) 1 day • Full Mechanical Properties (+20°C, 50% RH, 1,5 l/m^2) 3 weeks
Consumption:	• 1.0-1.2 l/m^2: Dense and smooth substrates • 1.5-1.8 l/m^2: Porous and rough substrates • 0.15-0.2 l/rm Sealing with 100 mm ElaProof Base Fabric • 0.6-0.8 l/rm Sealing with 150 mm ElaProof ROOF Reinforcement Fabric
Dry Film thickness:	0.6-1.0 mm (1,0-1,8 l/m^2)

APPLICATION INSTRUCTIONS

NOTE: ALWAYS REVIEW THE WORK METHOD INSTRUCTIONS RELEVANT TO THE SPECIFIC APPLICATION BEFORE STARTING INSTALLATION!

Surface Preparation

The substrate must be thoroughly cleaned of dirt, sand, dust, standing water, grease, as well as old paint, coatings, and rust layers. High-pressure washing and/or brushing can be used for cleaning. Using a suitable cleaning agent can help remove organic material effectively. Always use appropriate protective equipment during surface preparation!

Cracks in concrete structures or similar must be injected with grout resin, e.g., EUROPOX 4000 D, before starting the coating process. Follow the grout resin's application instructions during installation. Holes and cavities in concrete structures or similar must be patched with concrete repair mortar before starting the coating process. Suitable products include THORO STRUCTURITE R4 or THORO STRUCTURITE LEVEL repair mortar, depending on the filling requirements. Follow the repair mortar's application instructions during installation.

On metal surfaces such as sheet metal roofs, larger seams and holes (diameter over 2 mm) are recommended to be pre-filled with an elastic filler, e.g., SMP or MS polymer-based filler. Do not use silicone-based fillers for patching! Follow the elastic filler's instructions during installation. For holes larger than mentioned above, patching with metal patches is recommended.

Priming

Porous and absorbent like concrete surfaces must be primed with ElaProof Primer before coating or sealing. For porous and absorbent substrates, dilute the primer with water in a ratio of 1 part primer to 2 parts water. Refer to the ElaProof Primer product information sheet or work method instructions for detailed priming guidelines.

Mixing

Always mix ElaProof COOL ROOF coating before use. Larger packages should be mixed mechanically with a drill mixer. Smaller packages can be mixed manually, e.g., with a wooden stick. Use a spiral mixer, such as COLLOMIX KR, for mechanical mixing to minimize the amount of air incorporated into the coating.

Sealing Pipe Penetrations (with Penetration Reinforcement)

Cut a piece of Base Fabric or ROOF Reinforcement Fabric that extends at least 50 mm around the penetrated part. Cut a hole smaller than the penetrated part and slide the penetration reinforcement over the part so that the reinforcement forms a collar against the penetrated component. Leave the penetration reinforcement detached from the substrate and apply ElaProof PRO S coating to the penetration reinforcement area. Press the penetration reinforcement firmly onto the fresh coating, removing all air from beneath it, and brush ElaProof PRO S coating over it.

Sealing Pipe Penetrations (with Tape Reinforcement)

Often, pipe penetrations cannot be sealed with a reinforcement slipped over from above. In such cases, the penetration can be sealed using Codex BST 75 butyl tape combined with the coating. Attach Codex BST 75 butyl tape around the penetrated part, e.g., starting from the base of a pipe. Overlap Codex BST 75 butyl tape by at least 30 mm before cutting the tape. Make the overlap on the side of the penetration where water will not flow down from above, e.g., on a sloped roof. Once the Codex BST 75 tape is adhered around the penetrated part, round the joint between the tape and substrate with an elastic SMP or MS polymer filler. After the filler has dried, apply ElaProof COOL ROOF coating over the seal so that the coating extends beyond the rounded joint onto the substrate and over the edge of the Codex BST 75 tape adhered to the penetration.

Sealing Coating (Base Fabric / Reinforcement Fabric)
Apply ElaProof PRO S coating to the sealing area, slightly wider than the fabric to be used, with a brush or roller. Press the Base Fabric or Reinforcement Fabric firmly onto the fresh ElaProof PRO S coating. Smooth out all air bubbles from under the fabric, e.g., by pressing with a brush. Apply a new layer of ElaProof PRO S coating over the Base Fabric or Reinforcement Fabric, ensuring the fabric is completely saturated. If ElaProof PRO S coatings are applied over sealings with a high-pressure sprayer, allow the sealings to dry for at least 24 hours before starting the spraying process.

Limitations
• ElaProof COOL ROOF is not suitable for negative water pressure.
• Do not use ElaProof COOL ROOF on substrates with strong capillary moisture rise.
•If the substrate has old polyurethane or polyurea coatings, the surface must be mechanically roughened before coating. Always perform an adhesion test with ElaProof COOL ROOF in these cases before starting the coating.
•If the substrate has old epoxy coatings, the surface must be mechanically roughened before coating. Always perform an adhesion test with ElaProof COOL ROOF in these cases before starting the coating.
• If the substrate has old paint layers, perform an adhesion test with ElaProof COOL ROOF before starting the coating.
•Factory-coated steel roofs with PVDF, PVDF2, Pural, and Mattapural coatings may cause inadequate adhesion of ElaProof PRO S. Always perform an adhesion test with ElaProof PRO S on these surface treatments. If adhesion is insufficient based on the test, it is possible to use a separate adhesion primer to improve bonding.
• For instructions, contact Build Care Oy's technical support.

Coating
ElaProof COOL ROOF is primarily used to coat large areas, such as roofs. If necessary, the product can be diluted with 1-2% water by volume, meaning a maximum of 1.8-3.6 l of water can be added to a 180-liter drum. Dilution may be needed to facilitate application, especially in high installation temperatures. Avoid coating in direct sunlight and strong wind. When coating, apply ElaProof COOL ROOF to the substrate with a short-nap roller or high-pressure sprayer. The minimum requirements for the sprayer are: output of 6 l/min and spray pressure of 200 bar. The nozzles used should be .23-.31. Refer to the separate spraying instructions.

NOTE! It is recommended to apply ElaProof COOL ROOF coating in two separate layers to ensure that any holes caused by air bubbles in the substrate are properly sealed.
Also, check the adhesion of the original paint layer to the substrate.

Technical support
Phone: +358 207 902 710 or email:
info@buildcare.fi

Care and Maintenance
Please download separate care and maintenance instructions from:
www.elaproof.com