

PSC 250T/ECR – ROOF

Technical Data Sheet

PSC 250T ECR – ROOF

Acrylic based, thermal reflective paint designed for metal roofs.

DOCUMENT

PSC-TDS-ECR-ROOF EN

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Acrylic based, thermal reflective paint designed for metal roofs.

Applying PSC 250T/ECR - ROOF provides benefits such as:

- reduction of heating/air-conditioning costs (by up to 50%)
- thermal stability while using heating/air conditioning
- decrease/increase of ambient temperature
- pollution reduction in urban areas
- easy recycling
- insulation space savings due to the use of nanotechnology
- protection from corrosion
- protection from water condensation
- thermal insulation
- increased life cycle of the insulated surface

GENERAL DESCRIPTION

PSC 250T/ECR – ROOF is a highly efficient thermal insulation and protection material for metal roofs and adjacent elements. It is completely washable and resistant to dirt and diluted chemicals. The acrylic resin based paint uses the microspheres technology (Swiss formula). Each cell is sealed with a vacuum. Thermal resistance and insulating properties create a synergic effect in reducing surface heat transfer. The coating is also air nonpermeable, waterproof and has an excellent surface adhesion. High solar reflectivity and low conductivity create a perfect insulation effect. The paint is available in many color shades. Because of its reflective properties, it is advised to choose a light one (red, orange, yellow, green, blue, violet). After application forms a layer similar to gypsum. The product is eco-friendly, resistant to atmospheric conditions and UV radiation. It is a quick-drying material with excellent covering properties. The material is also environment friendly, as it is non-toxic.

THE PAINT IS INTENDED FOR USE ON THE FOLLOWING SURFACES: metals, all kinds of steel, aluminum, non-ferrous metals, metal roofs, galvanized sheets, metal storage tanks, pipes.

Do not apply on: PE, HDPE, PP, PTFE and other plastics.

POSSIBLE APPLICATIONS

Paint PSC-250T/ECR - ROOF is designed for color coating of new metal roofs and renovating older ones. It is also suitable for ceramic/concrete tiles on roofs with slope of over 3%. The material can be used for painting ventilation and garbage disposal pipes and those made of solid PVC/galvanized sheet. In case of new surfaces, clean it with solvent or apply sandblasting. It is suitable for use in climatic conditions where energy costs play an important role in maintaining a favorable temperature environment. The material is resistant to corrosion, water condensation and works in C4/C5 chemical environment.

CLASSIFICATION ACCORDING TO PN-EN 1062-1: 2005

Classification according to chemical properties	Acrylic based resin aqueous dispersion
Classification according the state of dissolution	Water-dilutable
Gloss 85° ≤ 10 (Matt)	G3
Coating density > 50 ≤ 100	E2
Grain volume (fine-grained). Marked according to PN-EN ISO 1524:2002 (EN 21524) equal up to 100 µm	S1
Water vapour diffusion (Medium) ≤ 150 > 15 g/m ² ·d	V2
Water permeability (Small) ≤ 0,1 kg/m ² h _{0,5}	W3
Covering of cracks	Not tested
Carbon dioxide permeability	Not tested

Code mark: PN-EN 1062-1 G3 E2 S1 V2 W3 - -

CLASSIFICATION ACCORDING TO PN-EN 1504-2: 2006

Water absorption W [kg/m ² H _{0,5}] according to PN-EN 1062-3: 2008	W<0,1
Impact resistance [Nm] according to PN-EN ISO 6272-2: 2011	Class II ≥ 10
Fatigue load [N] according to PN-EN 1542: 2000	1400
Adhesion [N/mm ²] ≥ 0.8 according to PN-EN 1542: 2000	0,8
Damage type according to PN-EN 1542: 2000	A
Abrasion resistance (load 1000g / number of cycles 1000) [mg] according to PN-EN ISO 5470-1: 2017-02, weight loss in [mg]	0,27
Improvement of wear resistance (load 1000 g / number of cycles 1000) [%], according to PN-EN ISO 5470-1: 2017-02	≥30

INSULATION PROPERTIES

PSC 250T/ECR - ROOF has a reflection factor value (TSR) of 91 ± 1% and thermal conductivity of 0,0324 W/mK. Traditional insulation paints just absorb sunlight, their formula slowing thermal exchange. In contact with PSC 250T/ECR - ROOF, the majority of sunlight energy is reflected back from the surface, the rest absorbed by the coating or removed as infrared rays.

SURFACE PREPARATION

All surfaces must be clean and free of dust, dirt, oil and grease. For cleaning metal surfaces, it is advised to use a wire brush or sandpaper. All rust must be removed from metal surfaces. Smooth surfaces must be mechanically roughened. In case of roofs it is advised to apply washing by water under pressure or sandblasting.

COLORS

The standard color is white. Other shades can be prepared on request using water-soluble dyes (eg Jotun, Hempel, Nippon).

NOTE: We recommend using light shades, darker colors have lower reflection of sunlight.

CONTENT OF VOLATILE ORGANIC SUBSTANCES

less than 10 g/l

CONSUMPTION OF PSC MATERIAL ON 1 m²

(one layer on all applicable surfaces with ideally level surface)

At a thickness of 0,15 mm: 0,18 liters per 1 m²

At a thickness of 0,20 mm: 0,24 liters per 1 m²

At a thickness of 0,25 mm: 0,30 liters per 1 m²

TIME OF EXCLUSION

Time before applying PSC-250T/ECR - ROOF: min. 1,5 hours according to temperature and relative humidity (see Manufacturer's instruction + Application manual - drying chart). After this time, no dust is poured onto the paint and the coating does not flow at increased humidity. Do not apply the product in case of rain or if the rain may start before the paint dries sufficiently.

WARNING: In all cases, the paint cannot be applied on a wet surface.

MIXING

PSC 250T/ECR - ROOF is diluted with water before use. Dilute only the amount of product you use. The water used for dilution should not exceed 0.2l per 10 liters pack. Mix the diluted mixture with a mixer at low speed (up to 150 rpm) for 3-5 minutes in mechanical mixers and 5-7 minutes with manual mixing. For detailed information please consult the manufacturer's instruction and the application manual.

APPLICATION EQUIPMENT

Recommended equipment: roller brushes or spraying machines. Brush can be used on very small areas. When applying the product with a brush, it is necessary to apply three cross layers to ensure adequate protection.

APPLICATION PROCEDURES

We recommend using the GRACO RTX 5500 for the application of structured surfaces, and GRACO MARK V or GRACO MARK VII (see manufacturer's specifications) for smooth surface applications. For detailed information please consult the manufacturer's instruction and the application manual.

PACKAGING

Plastic buckets of 18 liters (5,3 gallons) or 10 liters.

ADDITIONAL TRANSPORT WEIGHT

Net weight per liter: $0,9 \pm 0,05$ kg

Plastic bucket 18 liters (5.3 gallons): 16,2 kg

Bucket size: 34 cm width x 32 cm height

STORAGE

- in original and properly sealed containers, in temperature between +5 °C and +25°C
- in sealed rooms, away from heat sources.
- The product is water-dilutable and will be destroyed in sub-zero temperatures.

SHELF LIFE OF PSC IN PACKAGING

12 months from date of packaging (protect from freezing and direct sunlight)

IGNITION TEMPERATURE

Non-flammable (water-soluble)

PRODUCT CODE

PSC 250T/ECR - ROOF

Batch number: see package

WARRANTY / Protection time

1 year / 25 years

EXCLUSIVE REPLACEMENT

Exclusive compensation for goods that does not correspond to the warranty provided is the replacement of the product. The manufacturer is not responsible for any damages, including (but not limited to) wage costs.

For further information, please consult with the manual.

LEGAL DOCUMENTS

PN-EN 1062-1: 2005 Paints and varnishes. Varnish products and coating systems.

PN-EN 1504-2: 2006 Products and systems for the protection and repair of concrete structures. Definitions, requirements, quality control and conformity assessment. Part 2: Concrete surface protection systems.

Declaration of Performance, CE