

PSC 250T/HP+

Technical Data Sheet

Power Smart Coat - 250 Temperation / High Pressure plus

Multi-component material for thermal insulation and corrosion protection of metal surfaces.

DOCUMENT

PSC-TDS-HP-PLUS EN

VERSION

1.0

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PSC 250T/HP+

Power Smart Coat - 250 Temperation / High Pressure plus

| *Multi-component material for thermal insulation and corrosion protection of metal surfaces.*

Main benefits:

- Thermal insulation and thermo-reflective insulation,
- Anti-corrosive properties,
- Easy application, thanks to the possibility to apply the coating both manually by brush or mechanically by spraying. This makes it possible to insulate complex components, technical installations, etc,
- Low labour costs, compared to traditional insulation,
- Low-density coating, does not put additional strain on insulated structures,
- Uniform and uninterrupted structure, which eliminates thermal bridges and ensures insulation performance with the same values over the entire surface,
- Water-soluble, the coating is ecological and friendly to humans and the environment,
- Versatility, so that different surfaces can be insulated.

APPLICATION

PSC 250T/HP+ is very effective for insulating hot and cold water pipelines and air conditioning systems. It is an effective protection against frost penetration and surface condensation. The coating is stable and has high adhesion to metals without causing corrosion. In case of atmospheric changes, it is dust-free and non-toxic. PSC 250T/HP+ is applied to external and internal walls of equipment structures, pipelines, boilers, chimneys and industrial equipment. It provides high adhesion to all known materials, acts as a temporary waterproof and non-vapour permeable barrier. It is environmentally friendly and safe for use outdoors and indoors. PSC 250T/HP+ reflects up to (TSR) $92 \pm 1\%$ of infrared solar radiation. It can be tinted directly into any colour or a water-based dispersion paint can be applied to it.

TECHNICAL DATA

According to EN 15824:2010

No.	Parameter	Test Method	Declared Value
1	Water vapour permeability: – water vapour transmission rate V [g/m ² d]	PN-EN ISO 7783:2011	20±0,5
2	Water absorption [m ² ·h ^{0,5}]	PN-EN 1062-3:2008	0,01±0,2
3	Adhesion to substrate [MPa]	PN-EN 1542-3:2000	≥1,0
4	Thermal stability [MPa] – after 20 freeze-thaw cycles	PN-EN 13687-3:2002	2,0±0,8
5	Adhesion [MPa] – for metal	PN-EN 1542-3:2000	≥0,8

Supplementary parameters

No.	Parameter	Test Method	Declared Value
1	SBI test for reaction to fire	PN-EN ISO 13832:2010	B-s1, d 0
2	Classification in terms of reaction to fire: – flame spread of more than 150 mm above the point of flame application in 60 s – presence of flaming droplets/solid waste causing ignition of filter paper	PN-EN 13501-1+A1:2010 – $F_s \leq 150$ mm in 60 s – no burning droplets/solid waste causing ignition of the filter material	– compliance – compliance
3	Thermal conductivity coefficient [W/mK]	PN-EN 1745:2004; PN-EN 1745:2004/Apl:2006	0,0324
4	Volumetric density [g/cm ³]		Approximately 0.6
5	Spreading rate [kg/m ²] at coating thickness 1 mm		Approx. 0.7
6	pH		8-9

SUBSTRATE PREPARATION

PSC 250T/HP+ can be applied directly to corroded but stable surfaces. The substrate must be cleaned of dirt, dust, old coatings and loose parts such as flaking rust, thoroughly enough that they do not detach with the applied coating. Cleaning metal substrates of coarse rust is recommended using a wire brush or sanding disc. The substrate must be dry (no condensation). Oily and greasy dirt must be removed with a suitable preparation. Smooth surfaces are recommended to be mechanically matted. After mechanical treatment, the surface should be thoroughly cleaned of dust with a blower, brush or washed with water and allowed to dry completely. A pressure washer can be used to level the rough substrate and remove loose parts.

PREPARING THE COATING FOR APPLICATION

Read the instructions before applying the material. If necessary, the coating can be diluted with water (only dilute the amount of paint that will be needed for the job). The amount of water depends on the temperature of the substrate to which the coating is applied and also on the ambient temperature.

The coating may delaminate during prolonged storage. This is a natural symptom and, using a slow speed mixer (drill with agitator), the coating should be mixed at a maximum stirring speed of up to 150 rpm until a uniform consistency is achieved. Higher speeds may fragment and damage the microspheres and lead to a significant loss of thermal insulation properties of the material. Approximate mixing time: mechanical stirring 1-5 minutes, mixing by hand 7-10 minutes. Stir the material every 10 minutes.

WORKING TEMPERATURES

PSC 250T/HP+ can work on equipment with surface temperatures from -200 °C to +180 °C.

Up to 30 minutes at +200 °C.

Up to 5 minutes at +250 °C.

COATING APPLICATION

It is recommended to apply the coating with a brush or paint unit, one coat at a time, up to 0,5 mm thick. When using an aggregate, follow the manufacturer's recommendations. On smaller or hard-to-reach areas, it is

recommended to apply the coating with a long bristle brush. On larger surfaces, it is recommended to apply the coating with a sprayer, at a maximum pressure of 50 to 120 bar. Not all units are suitable for the application of PSC coating. We recommend aggregates from a manufacturer that ensure proper application parameters, such as GRACO equipment. Avoid working with the coating in rainy weather. Rinse tools with water after use.

Total drying time of one coat of 0,5 mm takes from 2 to 48 hours depending on temperature and air humidity. Another coat can be applied after the previous coat has dried. The ambient temperature during drying must be at least +5 °C. Coating in one layer thicker than 0,5 mm is not allowed. This may result in delamination of the coating. When applying the coating to a surface with a temperature above +80 °C, the material cures very quickly. In this case, it is recommended to prime the substrate with diluted material (amount of water added 40-50%). The drying time of the primer should be at least 1 hour.

STORAGE

Store PSC in undamaged packaging at a temperature between +5 °C and +25 °C, protected from sunlight. Transport may take place at temperatures of at least +5 °C. Packaging must be protected in an appropriate manner to prevent freezing and damage during transport.

NOTES

The product is not a hazardous product, the supplementary information given below are recommendations only.

Keep away from children, do not eat, drink or smoke when using the product. Use personal protective equipment when working. Protective clothing, gloves and goggles recommended. If eye contamination occurs, rinse eyes carefully with water for a few minutes, remove contact lenses and continue rinsing. If eye irritation persists seek medical advice/treatment. If the coating is ingested, rinse mouth immediately and seek medical advice/treatment. Wash contaminated skin with soap and water, apply regenerating cream. If medical attention is required, show the product packaging or label to the doctor. The coating is not classified as a dangerous product for the environment and is non-flammable in the liquid state.

SHELF LIFE

12 months from the date of manufacture indicated on the packaging.

FORMAL AND LEGAL DOCUMENTS

EN 15824:2010 - Requirements for external and internal plasters on organic binders.

Declaration of Performance.