

SINTEF Technical Approval

TG 20787

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Revised:
Amended:
Valid until 01.12.2027
Provided listed on
www.sintefcertification.no

SINTEF confirms that

Pc-Coat™ (Pretec combination coat)

has been found to be fit for use in Norway and to meet the provisions regarding product documentation given in the regulation relating to the marketing of products for construction works (DOK) and regulations on technical requirements for building works (TEK), with the properties, fields of application and conditions for use as stated in this document



1. Holder of the approval

Pretec Group AS
Kampenesmosen 3
1739 Borgenhaugen
www.pretec.no

2. Product description

Pc-Coat™ is corrosion protection of steel products based on surface treatment with hot dip galvanizing and powder coating. The products have documentation that the hot dip galvanizing is according to EN ISO 1461. The powder coating has a thickness of minimum 60 µm and consist of epoxy or polyester. The powder coating achieves full strength during the production process.

3. Fields of application

Pc-Coat™ is suitable for use in all atmospheric corrosion classes, included CX, according to EN ISO 12944-2:2017, with life expectancy as indicated in table 2. Pc-Coat™ with powder coating of epoxy shall not be used in areas with UV-exposure.

4. Properties

The approval concerns the properties of the steel products corrosion protection. Product properties for new material are given in table 1.

5. Environmental aspects

Substances hazardous to health and environment

Pc-Coat™ contains no hazardous substances with priority in quantities that pose any increased risk for human health and environment. Chemicals with priority include CMR, PBT or vPvB substances.

Effect on soil, surface water and ground water

Pc-Coat™ has not been tested with regard to leaching into soil and water.

Waste treatment/recycling

Pc-Coat™ shall be sorted as metal. The product shall be delivered to an authorized waste treatment plant for material recovery.

Environmental declaration

An environmental declaration (EPD) has been worked out according to EN 15804 for Pc-Coat™. For complete documentation see EPD no. NEPD-2704-1407-EN, www.epd-norge.no

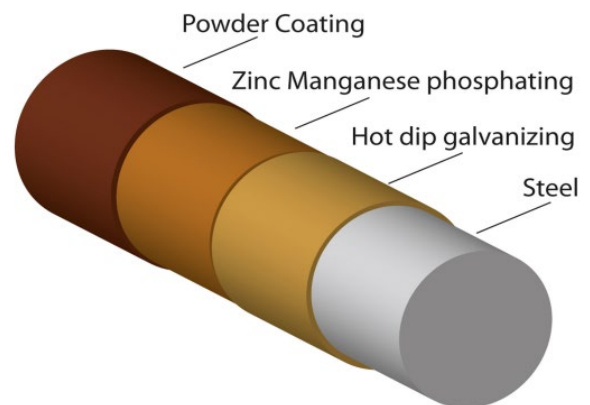


Fig. 1

Build-up of Pc-Coat™ surface treatment with epoxy or polyester powder coating.

6. Special conditions for use and installation

Pc-Coat™ shall not be exposed for the following chemicals:

- Strong acids
- Strong bases
- Aromatic solvents
- Gasoline
- Organic solvents as acetone, ethyl acetate MEK (methyl ethyl ketone) and TRI (trichloroethylene)

Pc-Coat™ should be inspected annually for damage that can reduce durability.

SINTEF is the Norwegian member of European Organisation for Technical Assessment, EOTA, and European Union of Agrément, UEAtc

SINTEF Certification
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Table 1
Product properties for Pc-coat™, epoxy and polyester

Property	Method	Value	Unit
Film thickness	Inductive meter acc. ISO 2808	≥ 60	µm
Surface properties	Visual assessment acc. ISO 4628	0 – 1	Classification
Structure of phosphate layer	Electron microscope (SEM)	Approved	
Adhesion	Cross-cut test acc. ISO 2409	0 – 1	Classification
Coating hardening	30 double strokes with MEK acc. Jotun QC Doc 10.230.37.G140	A1	Classification ¹⁾
Adhesion after boil test	Boiling in deionized water for 2 hours acc. Jotun QC Doc10.230.37.R080 +ISO 2409	1 – 2	Classification ²⁾

¹⁾ 10.230.37.G140 "Solvent resistance as an indicator for the powder coatings degree of hardening"

²⁾ 10.230.37.R080 "Resistance to boiling water for powder coatings"

Tabell 2

Life expectancy for powder coated and hot dip galvanized steel in different corrosion classes according to EN ISO 12944-9 and field experiences, compared to only hot dip galvanized steel.

Coating	Life expectancy ¹⁾ (year)		C2-C4	C5	CX
	Class	Range			
85 µm hot dip galvanizing Zn-Mn phosphating 60 µm polyester or epoxy powder coat	L	<7	•	•	•
	M	7-15	•	•	•
	H	15-25	•	•	•
	VH	>25	•	•	•
85 µm hot dip galvanizing	L	<7	•	•	•
	M	7-15	•	•	•
	H	15-25	•	•	
	VH	>25	•		

¹⁾ Life expectancy is defined as time until the steel corrodes on 3% of the coated area. L, M, H, VH are defined in EN ISO 12944-1. Life expectancy for only hot-dip galvanized steel is calculated based on corrosion rates specified in EN ISO 9224

7. Factory production control

Pc-coat™ is produced by Zhejiang Pretec Metal Co Ltd, JinChang Road 9, Haining, Province Zhejiang, China.

The holder of the approval is responsible for the factory production control in order to ensure that Pc-coat™ is produced in accordance with the preconditions applying to this approval.

The manufacturing of Pc-coat™ and the manufacturer's system for factory production control (FPC) is subject to continuous surveillance in accordance with the contract regarding SINTEF Technical Approval.

Zhejiang Pretec Metal Co Ltd has a quality system certified according to EN ISO 9001 and environmental management system that is certified according to EN ISO 14001. The system for factory production control is certified according to EN 1090-1.

8. Basis for the approval

The evaluation of Pc-coat™ is based on reports owned by the holder of the approval.

9. Marking


Finished products are not marked. Quality assurance of the finished surface-treated product is ensured by a 3.1 certificate in accordance with EN 10204 which accompanies the delivery. Traceability is ensured by delivery documents

The approval mark for SINTEF Technical Approval TG 20787 may also be used.

10. Liability

The holder/manufacturer has sole product responsibility according to existing law. Claims resulting from the use of the product cannot be brought against SINTEF beyond the provisions of Norwegian Standard NS 8402

for SINTEF



Susanne Skjervø
Approval Manager