

SBC

SYSTEM SPECIFICATION

CATEPOX® HEAT- AND WEAR-RESISTANT COATING SYSTEM

Document Information

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1. Purpose

This System Specification defines the technical configuration, application requirements, recommended coating systems, execution procedures and quality assurance requirements for the CATEPOX® Heat- and Wear-Resistant Coating System.

The purpose of this document is to provide a uniform technical basis for the specification, installation, inspection and long-term maintenance of the coating system.

2. Intended Use

The CATEPOX® coating system is a two-component epoxy–polyamide protective coating developed to provide long-term corrosion protection and mechanical durability for industrial and agricultural applications.

The primary functions of the coating system are:

- Long-term corrosion protection;
 - Mechanical protection against wear and impact;
 - Increased abrasion resistance;
 - Resistance to aggressive chemicals;
 - Waterproof protective barrier;
 - Extended service life of protected structures.
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3. System Components

The coating system consists of two components.

Component A

Epoxy resin-based binder.

Functions:

- Film formation;
 - Adhesion to the substrate;
 - Development of mechanical strength.
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Component B

Polyamide curing agent.

Functions:

- Cross-linking of the epoxy resin;
- Development of chemical resistance;
- Improvement of abrasion resistance;
- Enhancement of heat resistance.

The two components shall only be used in the specified mixing ratio.

4. Suitable Substrates

The coating system may be applied to:

- Carbon steel;
 - Structural steel;
 - Alloy steel;
 - Concrete;
 - Reinforced concrete;
 - Timber;
 - Aluminium (with suitable primer);
 - Galvanized steel (with suitable primer);
 - Other properly prepared mineral substrates.
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5. Recommended Coating Systems

5.1 Structural Steel

Layer	Material
First coat	CATEPOX®
Second coat	CATEPOX®

5.2 Concrete

Layer	Material
Penetrating coat (if required)	Diluted CATEPOX®
First coat	CATEPOX®
Second coat	CATEPOX®

5.3 Timber

Layer	Material
Impregnation coat	Diluted CATEPOX®
First coat	CATEPOX®
Second coat	CATEPOX®

5.4 Aluminium and Non-Ferrous Metals

Layer	Material
Adhesion primer	Suitable primer
First coat	CATEPOX®
Second coat	CATEPOX®

6. Recommended Film Thickness

The coating shall be applied uniformly to achieve the specified protective performance.

The manufacturer's declared theoretical coverage is:

Approximately 5 m²/L at a dry film thickness of 100 µm.

The final dry film thickness shall be determined according to:

- Corrosivity category;

- Environmental exposure;
 - Mechanical loading;
 - Project specifications.
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7. Surface Preparation Requirements

Substrates shall be:

- Clean;
- Dry;
- Free from dust;
- Free from grease and oil;
- Free from loose or poorly adhered material.

Steel substrates shall be completely free from corrosion products.

Concrete shall possess adequate strength and acceptable moisture content before coating application.

8. Mixing

Mixing ratio

1 : 1 by volume

Mechanical mixing is recommended until a homogeneous mixture is obtained.

Mixed material shall be used within the specified pot life.

Pot life:

Minimum 3 hours at 20 °C.

9. Application Conditions

Recommended application conditions include:

- Dry substrate;
- Rain-free environment;
- Adequate ventilation;
- No surface condensation.

The substrate temperature shall always remain above the dew point during application and curing.

10. Drying and Curing

At 20 °C

Stage	Time
Surface dry	≤ 5 hours
Through dry	≤ 48 hours
Full cure	≤ 12 days

At 70 °C

Stage	Time
Full cure	Approximately 5 hours

11. Expected System Performance

Property	Performance
Adhesion	EN ISO 2409 – Classification 0
Flexibility	4 mm (Erichsen)
Impact resistance	≥30 cm
Continuous heat resistance	100 °C
Intermittent heat resistance	120 °C
Salt spray resistance	≥500 hours
Water resistance	Excellent
Chemical resistance	Excellent
Abrasion resistance	High

12. Quality Control

During installation, the following should be verified:

- Surface preparation;
- Mixing ratio;
- Pot life;
- Film thickness;
- Coverage;

- Drying time;
- Coating continuity;
- Adhesion where required.

Additional laboratory testing may be performed in accordance with the applicable EN ISO standards where specified.

13. Maintenance

Periodic visual inspection of coated surfaces is recommended.

If mechanical damage occurs:

- Remove all damaged coating;
 - Clean and prepare the substrate;
 - Apply fresh CATEPOX® coating in accordance with the Application Guide.
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14. Expected Service Life

The service life of the coating system depends on:

- Surface preparation;
- Application quality;
- Environmental conditions;
- Film thickness;
- Maintenance programme.

When correctly applied and maintained, the CATEPOX® coating system provides long-term corrosion protection under normal service conditions.

15. Related Documents

- Technical Data Sheet (TDS)
 - Product Description
 - Application Guide
 - Safety Data Sheet – Component A
 - Safety Data Sheet – Component B
 - Laboratory Test Reports
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16. Disclaimer

The information contained in this System Specification is based on available laboratory testing, technical documentation and manufacturing experience. Actual performance depends on substrate condition, environmental exposure, application method and workmanship. It is the responsibility of the user, designer and contractor to ensure that the coating system is suitable for the intended application and is installed in accordance with this specification and applicable regulations.