

Technical document: TD-027, English translation

## PRIMTEC Steel 1 step coat Technical Specification and Application Manual

### I Anti-Corrosive Primer

**Generic type:** PRIMTEC Steel 1 step coat is an anti-corrosive coating for basic protection of steel structures, profiles and metal elements. In the FIRESTOP system, it is used as a primer applied before an intumescent coating and usually alkyd top coats.

**Description:** PRIMTEC Steel 1 step coat is one component quick drying synthetic, anti-corrosive primer. It is made on the basis of shortoil alkyd resins dissolved in organic solvents, pigments and anti-corrosive additives. In one layer can provide 80-100 µm DFT. It is used both indoors and outdoors, on new structures and for the repair of the existing ones. It is available in oxide red and grey shades.

**Properties:**

- Rich coating film achieved in one layer shortens application.
- Excellent adhesiveness to metal surface and resistance to external atmospheric impacts.
- Excellent corrosion protection and quick drying.
- Application by spraying – application with airless spray/ pump on the site or in the workshop prior to structure assembling or on existing construction.
- Simple and quick repair of damaged layers of the coating that occurred during structure installation.
- Long life in exploitation.
- Enables good adhesion of the expanding fireproof coating to the metal surface.

### II Physical and Chemical Data (Typical Values)

#### 2.1. Details

Technical properties:

No.	Description	Recommended value
1.	Colour	oxide red, gray
2.	Viscosity	2000 - 4000 mPa*s, R3/30rpm
3.	Solid matter content	68-72%
4.	Density	1.40 (+/- 0.1)g/cm <sup>2</sup>
5.	VOC content	≤490 g/l

### III Base and Surface Preparation

#### 3.1. Precautions:

Prior to the application of primer PRIMTEC Steel 1 step coat, it is necessary to do the following:

- Read the instruction before application.
- Equipment, tools and accessories needed for application should be clean, free of dried material residues.
- Surface should be dry, clean and degreased.
- Wet film thickness gauges should be at your disposal.

#### 3.2. Surface preparation:

PRIMTEC Steel 1 step coat is applied to a previously prepared, clean and dry metal surface. Preparation includes

corrosion, dirt and grease removal using Motofus, nitro thinner or similar products and sandblasting according to ISO 8501-1 St 3/ Sa/ 2 ½.

The first layer of primer must be applied max 4 h after sandblasting.

**The new constructions:** must be cleaned, degreased and prepared according to previous instructions before application of PRIMTEC Steel 1 step coat.

**Repair of existing constructions:** includes removal of existing coating, dirt and grease, and also corrosion removal using chemical products or sandblasting – according to previous instructions.

For chemical treatment we recommend Motofus degreaser first, and subsequently anti-corrosive agents like Antikorizion. The formed patina must be removed with a cloth moistened with a degreaser or paint thinner, and after that PRIMTEC Steel 1 step coat is applied.

### 3.3. Application Limitations:

**Metal surfaces that don't contain iron:** PRIMTEC Steel 1 step coat cannot be used for protection of metal surfaces made from galvanized steel, so it is necessary to choose other suitable primer, which must also satisfy the requirement of good compatibility with the next layer - intumescent FIRESTOP steel X-MART coating.

## IV Tools

These are general guidelines for product application. Site (working area) conditions may require some modifications of listed data in order to achieve desired results.

### Mixer:

Use 1/2" boring machine with an average an instantaneous mixer.

### Pumps – airless spray gun:

nozzle diameter – 0.013" to 0.015"

discharge pressure - 100-150 bar.

### Spray guns:

nozzle diameter – 1.2-2.5.

### Brush and Roller:

Application method recommended on smaller areas. For application with brush and roller, ensure a continuous coat to avoid thick brush finishing. Use of a small hairy roller will produce a light and lasting final layer.

Coating is applied in one layer.

## V Mixing and Thinning

Mix well before use with a mixer, while observing the above listed instructions. If thinning is required use synthetic PRIMTEC thinner, addition: up to 10%.

## VI Application Conditions

### 6.1. Temperature and atmospheric conditions:

It is recommended to apply and use PRIMTEC Steel 1 step coat onto dry and protected steel profiles. Application temperature: 5°C to 35°C. Surface temperature: min. 3°C above the dew point. Relative air humidity should be below 80% for a successful application. If PRIMTEC Steel 1 step coat gets wet during application, it may cause a number of problems such as damage to the coating layer, the inability of adhesion, etc. PRIMTEC Steel 1 step coat should be protected from the rainfall and excessive humidity until it becomes completely dry.

### 6.2. Protection of Surrounding Surfaces:

Finished surfaces should be protected from damage and repeated spraying. Intumescent FIRESTOP coating can

be applied after complete drying of PRIMTEC Steel 1 step coat.

## VII Drying Time

The drying time of coatings depends on a number of factors. The values refer to the temperature conditions of 23°C and relative humidity of 70% max. Drying time can vary due to changes in temperature, humidity, air movement - ventilation, method of application of coatings, coating thickness, etc.

Dry - touch	45-60 min
Completely dry	24 h

## VIII Measurement of Coating Thickness

Dry film thickness (DFT) can be measured with gauging equipment such as electro-magnetic meter (dry film thickness gauge). Measurement of final thickness can be performed as soon as the coating is hard enough to enable reading without furrowing the surface. Optimal values DFT: 80-100 µm.

## IX Consumption

3-4 m<sup>2</sup>/kg for 80-100 µm DFT. These values may vary due to wastage, i.e. method of application, conditions of dispensing equipment, the working conditions, preparation of metal surfaces, etc.

## X Cleaning and Disposing

Wash wet brushes with thinner or Motofus degreaser. Do not spill liquid waste from cleaning and residual products into drains and waterways. Dispose of product residues and packaging in accordance with regulations.

## XI Safety and Protection

Store and use away from sources of ignition, heat and oxidizing agents. Avoid contact with skin, eyes and respiratory organs. Use only in well-ventilated areas. Wear suitable protective clothing, respiratory mask and gloves.

Detailed information on the product classification, hazard statements and precautionary statements are listed in the Safety Data Sheet.

## XII Packing, Handling and Storage

**Packing:** Metal cans, 30 kg net, or on request.

**Storage:** Keep in the original tightly closed container and in a dry and well-ventilated place, at temperature: 5-35°C. Transport in upward position.

**Product life:** 36 months, if stored in recommended storage conditions and in the original packing.

## XIII Transport and Regulatory Information

ADR/RID/IMDG/IATA: UN 1263 Paint; 3; III

## XIV Conclusion

To our best knowledge, technical data contained herein are true and accurate as of the day of publishing and may not be modified without prior notification. User should contact FIRESTOP Internacional to check for accuracy before giving specification or order.

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**XVI Signature**



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