

**Ethyl silicate monocomponent top coat resistant up to 400 °C. Reinforces the primer's anticorrosive protection at high temperatures. High build application.**

ESI: Ethyl silicate; HB: High Build

### Description

HT03 is a moisture curing inorganic silicate top coat, resistant to UV radiation and temperature up to 400°C (with peaks up to 500°C). It provides excellent an extra sealing and anticorrosive reinforcement for steel protection systems with zinc ethyl silicate primers.

HT03 exhibits an excellent weatherability in severe atmospheric conditions resisting temperature cycles and facility's stops.

It can be applied directly over building materials consolidating the substrate.

### Characteristics

- Temperature resistant up to 400°C (applied over zinc rich ethyl silicate primers).
- High build coat with easy application.
- Excellent chemical resistance to water, saltwater and solvents.
- Good resistance to acid and alkaline vapours.
- Excellent wetherability.
- Good curing at low temperatures (down to -5°C).
- Very good impact and abrasion resistance.
- Suitable for high humidity environments.
- Pre-stoving is not needed.
- Fast-drying.
- Excellent adhesion over inorganic ethyl silicates.
- Inert product, it's not affected by UV radiation condensations and outdoor environment conditions.
- Recoatable with itself.
- Flame retardant properties.

### Recommended uses

- For workshop, new construction and maintenance.
- Top coat over zinc ethyl silicates primers, for heat resistant systems up to 400°C with intermittent peaks up to 500°C.
- For petrochemical industry, refineries and offshore structures; as a single layer protection of large structures previously primed with silicate shop-primer or silicate primers.
- For the corrosion protection of steel chimneys, exhaust pipes or vents.
- Consolidating sealer for concrete, stone or brick.

### Basic Data

Determined at 23 °C y 60% RH:

Colour:	White and Grey
Finishing:	Matt
Volume solids	63% ± 2%
Specific Weight:	1.68 ± 0.05 g/ml
Recommended dry thickness:	Minimum: 50 µm Maximum: 150 µm
Theoretical coverage:	12.6 m <sup>2</sup> / l (50 dry µm) 4.20 m <sup>2</sup> / l (150 dry µm)
Dry to handle (100 µm):	18 hours
Minimum recoatable time (100 µm):	16 hours
Maximum recoatable time (100 µm):	Unlimited
COV's	363 g/l
Dry temperature resistance:	400°C (continuous)

#### Drying and recoating times (125 dry microns)

Temperature*	0 °C	10°C	20°C	30°C
Touch dry	90 m	60 m	30 m	10 m
Total dry	3 d	2 d	18 h	12 h
Curing time**	4 d	2 d	1 d	16 h
Recoatable at	2 d	32 h	16 h	8 h

d:days, h: hours, m: minutes

\*Referred to the substrate temperature

\*\*See remarks section.

#### 400°C Anticorrosive protection system

1<sup>st</sup> coat: ZN05 – PV. ESI Zinc Primer A – 75 microns

2<sup>nd</sup> coat: HT03 – PV. ESI Heat Top Coat HB – 125 microns

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### Surface preparation

**HT03** can be applied over primed surface or directly over concrete. The surface must be clean, dry and free from dust and other pollutants.

- Over primer: the primed surface with zinc ethyl silicate (ZN05) must be clean, dry and free from dust and other pollutants, remove them using a neutral detergent emulsion, rinse with water and let dry according to ISO 8504 and SSPC-SP-1. If corrosion byproducts are formed a blasting with fine abrasive is recommended. In welds and damaged areas perform abrasive blasting to grade Sa 2 ½ (ISO 8501), and re-prime with ZN05. Once cured, apply the HT03.
- Over concrete: it must be at least 28 days curing time, a minimum tensile strength of 1 N/mm<sup>2</sup>, and humidity below 4% measured at 2 cm deep. Carry out a blasting to remove the grout and other pollutants.

For other surfaces, contact with our technical department.

### Application directions

**HT03-PV. ESI Heat Top Coat HB** is supplied as single component. Stir well with a power mixer before use to obtain a homogeneous product, without sedimentation at the bottom. Product ready to use. Adjust viscosity, if necessary, only with recommended thinners and considering the following instructions.

For indoor application, proper ventilation is recommended during application in order to facilitate curing and solvent evaporation.

Thinner	VD-770
Cleaning solvent	VD-500
Airless	Thinner: 0-3% Nozzle diameter: 0.017" a 0.021 " Nozzle pressure: 150-200 bars
Air spray	Thinner: 10-15% Nozzle diameter: 0.055"-0.070" Nozzle pressure: 3-4 bars
Brush/Roller	Thinner: 0-5% (For small areas and touch-ups)

### Application conditions

- The substrate temperature must be between -10°C and 50°C and always 3°C above the dew point.
- The relative humidity must be between 45% and 90% (moisture curing product).

### Remarks

- **HT03** is moisture sensitive, so once opened it is recommended to the total consumption of the product. The container must be kept tightly closed and handle with care, otherwise it may involve a sealing loss and therefore the product thickening, and / or the skin or lumps formation in the paint.
- Startup of the coated element must not be carried out until the product is fully cured.
- Curing and recoating times will be longer below 50% relative humidity, especially at low temperatures.
- If higher film thickness is required, the product can be recoated with itself or other ethyl silicates, always before the total curing of the film. After this time a soft blasting (not polishing) is recommended before recoating.
- Application of thicker layers than recommended involves longer curing times and could lead to cracks formation.
- The applied product may have color variation over time.
- For application over zinc rich ethyl-silicate the use of mist-coat/full-coat technique is recommended.
- Theoretical spreading rate can change in function of several factors: application method, losses during mixing and application, surface roughness, and excessive dilution.

### Health and safety

Safety labels of the packaging containing information necessary for proper handling. It is important to meet the requirements of the legislation. As a general rule, inhalation of solvent vapours and paint mist should be avoided, as well as contact of liquid paint with skin and eyes. When paint is applied in enclosed spaces forced ventilation should be provided, accompanied by the appropriate respiratory protection, skin and eyes, especially when applied with spray.

Complete information can be found on the safety data sheet available in [www.pinvisacoatings.com](http://www.pinvisacoatings.com)

### Packaging and storage

Cans of 15 litres

Store indoors between 5°C and 35°C during 12 months. Store away from heat sources and protected from freezing and moisture.

After this time the use of the product is not recommended. Ask for a possible inspection in our plant.

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