

CS Hi-Build Application guidance



Surface Preparation

- We recommend that, the surface preparation prior to the application of Wencon CS Hi-Build must comply with ISO 8501, or a comparable quality certification to ensure the desired level of quality is achieved.
- Clean and degrease all surfaces, including cut-outs, rat holes and welds shall be rounded to a radius of at least 2 mm. Weld splatter must be removed.
- Weld seams burned, and rusty areas blast cleaned to min ISO-Sa 2½ or power tool cleaned to min SPSS-Pt3 prior Grit Blasting
- Rough to an angular profile between 75 – 100 µm (in accordance with ISO 8503 parts 1 and 2)
- Abrasive blasting to a cleanliness of white metal (Sa3/SP5) or near-white metal (Sa 2½ /SP10) followed by removal of all abrasive residues
- The purity of the sandblasting is visually checked.
- Bresle Sampler test for measuring soluble salts / chlorides in the steel surface (ISO 8502-6) limit value <20 mg / m².
- Distance to Dew Point of minimum 3° C throughout the application process.
- Optional: Measurement of any acid contamination of the steel surface is measured (iron sulfate) with KTA Scat test kit, limit value is <10 micrograms / cm².

Mixing Ratio 2:1

Weight: 66,85 A (Base) to 33,15 B (Activator) (parts by weight)
Volume: 2 x A (Base) to 1 x B (Activator) (parts by volume)

The product is supplied in sets (A+B) of 35kg (27.75L).
We recommend to stir each component before mixing.

Application

Spray

For achieving the desired thickness of the film, it is advised to apply Wencon CS Hi-Build in a single or multiple layers application. It is essential to ensure a smooth and continuous paint film without any pinholes. To obtain the desired thickness of the film, use the appropriate nozzle size and maintain a consistent distance of 30-50 cm between the spray gun and the surface. Verify that the coating's viscosity is suitable and the spray equipment possesses adequate output pressure and capacity to facilitate effective atomization. Enhancing atomization and film formation can be achieved by preheating the curing agent and base prior to mixing. The ideal temperature depends on the desired DFT, nozzle size, and spraying pressure. In the event that a larger nozzle is needed to enhance the spray rate, it may be necessary to heat the coating.

Apply the coating layer homogeneously and as close to the specification as possible. Control paint consumption to avoid excessive film thickness by measuring wet film thickness or controlling paint consumption. It is also recommended to control base and curing agent consumption to keep track of the mixing ratio. The finished coating should have a smooth, glossy surface.

After application, flush the mixing system immediately with epoxy cleaner during breaks in application longer than half the pot-life, it is recommended to flush the system. Avoid air entrapments.

Brush

Final surface may not appear 100% smooth when using a brush, nevertheless, for small areas and touch-ups, hand tools such as brushes can be used for the application. It is recommended to apply each coat across the preceding one whenever feasible, following standard painting practices. We recommend to test before the final application.

Recommended Spray Equipment

- Proportioner pump 2K with remote mix manifold and preheaters.
- Suitable 2K equipment mixing-block at the end of the hoses to have a very short "staying" in the equipment of mixed product.
- The spray equipment should have a solvent flushing pump.
- Nozzle sizes 13 to 21, test for best result depending on temperature.
- Approximately pressure 180 - 250 bar depending on temperature and nozzle size.
- Heated hoses when distance between pump and application location exceed range of standard hose.

Optimal Atmospheric Conditions

No coating shall be applied when the relative humidity is above 85%.

- Coating shall not be applied and dried during fog, mist, rain or if the steel surface temperature is less than 3 °C s above the dew point.
- Surface temperature must be above 10°C [50°F] during application and curing.

Film Thickness

Wencon CS Hi-Build can be applied in film thickness from 100-1500 µm per layer.

WFT/DFT - The product's film thickness remains consistent in both wet and dry conditions due to its volume-solid properties

Product Potlife Spray application

Spray hot airless application	
Mixed	Fluid
Potlife @20 °C	55-60 minutes
Potlife @30 °C	20-25 minutes
Potlife @40 °C	13-15 minutes
Potlife @50 °C	5-8 minutes
Potlife @60 °C	2-4 minutes

It is important to note that the use of preheated products, long spray hoses and pressure-induced heat can result in a shorter practical pot-life.

When mixed in pot (for brush applications)

Pot Life @20 °C mixed for application by hand.

Depending on amount mixed product and temperature.

Mixed in small amounts, the pot life is approximately 30 minutes at 20°C.

Curing Time

Temperature	10° C	20° C	30° C	40° C	50° C	60° C
Dry to touch/overcoat	10 hrs.	5 hrs.	3,5 hrs.	2,5 hrs.	1 hrs.	0,5 hrs.
Dry to handle	15 hrs.	6,5 hrs.	5 hrs.	3 hrs.	2 hrs.	1 hrs.
Fully Cured	14 days	7 days	4 days	2 days	1 day	12 hrs.

OVER COATING is optimally performed in the time between tack free and cured. Higher temperatures are not recommendable for application circumstances (substrate and surrounding temperatures).

Applying two or more layers will significantly reduce the effect and generation of pores.

Dyeing of Wencon CS Hi-Build

Before the final application, we recommend making a sample when dyeing Wencon CS Hi-Build.

Use only pigment suitable for epoxy, maximum 2% by Volume. Dyeing of the product is always under user responsibility.

Disclaimer

Any Modification to the product falls under user responsibility.