



**ULTRA HIGH SOLID & SPEED SYSTEM (UHSS)**  
**HEMPADUR ZINC 17310**  
**HEMPAREA ENAMEL 55980**

**"Customer request"**

"We need to increase productivity by 30 %"

**"Customer experience"**

"Hempel has delivered the solution in full"

**HEMPEL**



## How you can benefit from UHSS?

The system (UHSS) is a new solution comprising HEMPADUR ZINC 17310 and HEMPAREA ENAMEL 55980. Both of these products have high solids content (87% and 88%), and their VOC contents are only 160 g/litre in the case of HEMPADUR ZINC and 75 g/litre for HEMPAREA ENAMEL.

The UHSS system is extremely fast drying. A painted surface can be dry in 3-1/2 hours, which can truly revolutionize production. This will provide operating cost savings and, due to the time savings, one shift can be wholly eliminated.

Moreover, lower paint consumption may be achieved due to the application of a 2-coat system in place of the standard 3-coat system. Finally, UHSS promises low VOC emissions to comply with very strict EU standards.

How you will achieve these benefits?

Answer: "By using 2-coat UHS system instead of standard 3-coat systems!"

**UHSS is suitable for shop application in following areas:**

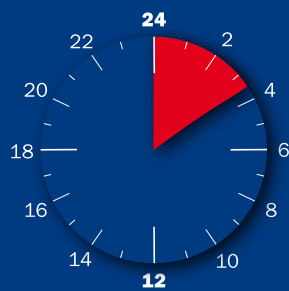
- Refineries
- Chemical industry
- Power generation
- Infrastructure projects
- Wind Turbines



UHSS complies with the C5-M category for highly corrosive environments as well as the C4 category under the ISO 12944 corrosion standard.

## Total process time at 20°C

Hours **3,5 h**



### UHSS

**HEMPADUR ZINC 17310**  
**HEMPAREA ENAMEL 55980**

Hours **19 h**



### Standard 3-coat system

**HEMPADUR 17360**  
**HEMPADUR MASTIC 4588/45881**  
**HEMPATHANE TOPCOAT 55210**

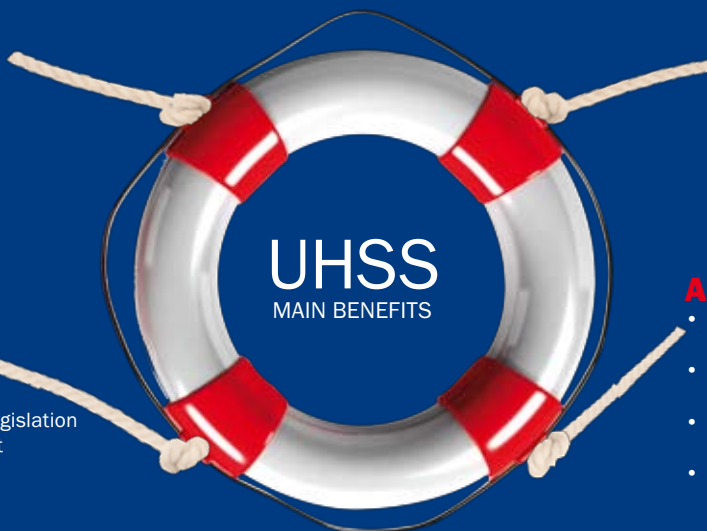
The drying time of the 2-coat UHSS is just 20% that of when a standard 3-coat system is used. UHSS can be dry in 3.5 hours, which corresponds to a half shift, while the drying time for the standard system is 19 hours (2 shifts at least). These time savings enable substantial reduction in resources devoted to covering labour and other operating costs.

### PRODUCTIVITY

- Short drying times
- Less waste (2-K spray)
- 2-coat application instead of 3-coat
- Less manpower needed

### LEGISLATION

- Very low VOC content
- Easily will comply with EU legislation
- Does not harm environment



### ENERGY SAVINGS

- Less energy for heating
- Less energy for whole application process

### APPLICATION COSTS

- Lower paint consumption /2-coat instead of 3-coat/
- Larger covered surface - due to the high volume of solid
- No need of high volumes of solvents needed
- Speedier paint shop application

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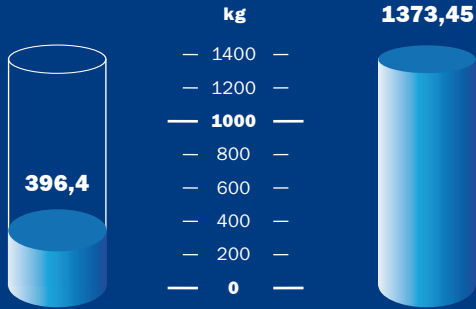


## Negligible amount of VOC released to the atmosphere

### UHSS

HEMPADUR ZINC 17310  
HEMPAREA ENAMEL 55980

Released VOC in kg



Using UHSS reduces VOC by 977 kg per 10.000 sqm.

### Standard 3-coat system

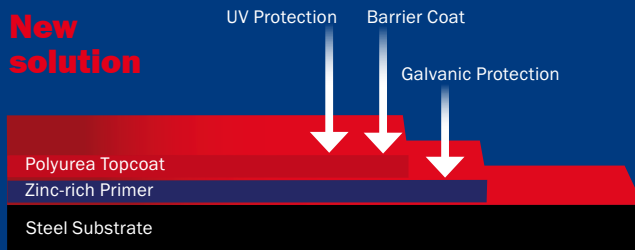
HEMPADUR ZINC 17360  
HEMPADUR 47410  
HEPATHANE TOPCOAT 55214

UHSS	DFT in $\mu\text{m}$	Volume solid	Consumption in litres	Released VOC in kg
HEMPADUR ZINC 17310	160	87	1 839	294,2
HEMPAREA ENAMEL 55980	120	88	1 363	102,2
<b>TOTAL</b>	<b>280</b>		<b>3 202</b>	<b>396,4</b>

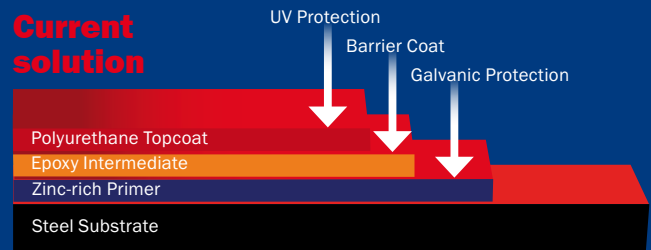
Standard 3-coat system	DFT in $\mu\text{m}$	Volume solid	Consumption in litres	Released VOC in kg
HEMPADUR ZINC 17310	50	61	819,6	299,15
HEMPADUR 47410	140	70	2 000	600
HEMPATHANE TOPCOAT 55214	50	49	1 020	474,3
<b>TOTAL</b>	<b>240</b>		<b>3 839,6</b>	<b>1373,45</b>

The example prepared for 10.000 sqm of painted surface.

### New solution



### Current solution



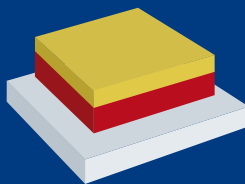
The example shows that new solution offers all benefits of 3-coat system which are incorporated in just 2-coats. It means that galvanic protection which ensures Zinc rich primer and barrier and UV protection which is provided by Polyurea topcoat is reduced to only 2 layers of paint.

## HEMPEL RECOMMENDED SYSTEM SPECIFICATIONS

### Interior steel surfaces:

C3/C4 according to ISO 12944-5

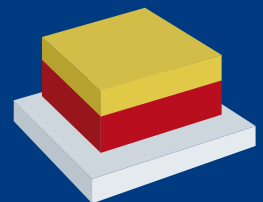
HEMPADUR ZINC 17310	120 $\mu\text{m}$
HEMPAREA ENAMEL 55980	80 $\mu\text{m}$
<b>TOTAL</b>	<b>200 <math>\mu\text{m}</math></b>



### Exterior steel surfaces:

C5-M according to ISO 12944-5

HEMPADUR ZINC 17310	200 $\mu\text{m}$
HEMPAREA ENAMEL 55980	120 $\mu\text{m}$
<b>TOTAL</b>	<b>320 <math>\mu\text{m}</math></b>



## HEMPADUR ZINC 17310

### PHYSICAL CONSTANTS:

Shade nos:	Reddish grey/19830
Finish:	Glossy
Volume solids, %:	87 $\pm$ 1
Theoretical spreading rate:	5.4 m <sup>2</sup> /litre - 160 micron 218 sq.ft./US gallon - 6.4 mils
Flash point:	39°C/102°F
Specific gravity:	2.5 kg/litre - 20.9 lbs/US gallon
Surface dry:	3 - 4 hours at 20°C/68°F
Dry to touch:	4 (approx.) hour at 20°C/68°F
V.O.C.:	160 g/litre - 1.3 lbs/US gallon

### APPLICATION DETAILS:

Application method:	Dual feed airless spray
Pot life:	10 minutes (20°C/68°F)

### PHYSICAL CONSTANTS:

Shade nos:	White/10000
Finish:	Glossy
Volume solids, %:	88 $\pm$ 1
Theoretical spreading rate:	7.3 m <sup>2</sup> /litre - 120 micron 294 sq.ft./US gallon - 4.8 mils
Flash point:	39°C/102°F
Specific gravity:	1.6 kg/litre - 13.4 lbs/US gallon
Surface dry:	15 (approx.) min. at 20°C/68°F
Dry to touch:	30 - 45 (approx.) min. at 20°C/68°F
V.O.C.:	75 g/litre - 0.6 lbs/US gallon

### APPLICATION DETAILS:

Application method:	Dual feed airless spray
Pot life:	5-7 minutes (20°C/68°F)

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