

## Chester Coating E1

### DESCRIPTION:

Chester E1 Coating is a two component liquid coating material designed to impose hydrodynamic. The material contains a modified epoxy-novolac resins, fillers and anti-corrosion pigments. With Chester Coating E2 provides a covering system designed to protect metal and concrete surfaces from aggressive chemicals at elevated temperatures. Cures at room temperature. The product contains 100% solids.

### TYPICAL APPLICATION:

- SECURING STORAGE TANKS PROTECTION OF STEEL STRUCTURES
- SECURING FLUES
- SECURING SLUDGE CHANNELS AND TANKS
- PROTECTION OF PIPELINES

### Technical data

Cured Density	----	----	1,22 ± 0,05 g/cm <sup>3</sup>	
Mix Ratio by Volume	----	----	whole pack	
Mix Ratio by Weight	----	----	5 : 1	
Color			(red)	
Tensile Shear (Stainless Steel)	ASTM 1002	ISO 4587	17,5 MPa	2540 psi
Tensile Shear (Mild Steel)	ASTM 1002	ISO 4587	18,0 MPa	2610 psi
Tensile Shear (Aluminum)	ASTM 1002	ISO 4587	13,8 MPa	2000 psi
Tensile Shear (Brass)	ASTM 1002	ISO 4587	12,2 MPa	1770 psi
Peel Strength ( Steel )	ASTM D4521	ISO 4624	22,00 MPa	3190 psi
Temperature Resistance Wet	----	----	80°C	
Temperature Resistance Dry	----	----	150°C	
Minimal Working Temperature	----	----	-50°C	
Working Life (68°F)(20°C)	----	----	45 min	
Cured Hardness	ASTM D2240	----	87°Sh D	
Curing time in 20°C			min. 2h	

### DIRECTIONS FOR USE

#### Conditions during the application.

The product is not recommended to apply when the ambient temperature is below 15°C and the relative humidity is above 90% or when condensation occurs on the surface to be repaired.

#### Metal surface preparation.

From the surface to be secured you need to remove any contamination, grease, oil, loose corrosion products, old paint coatings, etc. The pre-washing it is recommended to use Cleanrex, Cleanrex II or Cleanrex RM. Surface that is prepared this way, need also to be roughen. If it is possible by blasting (shot blasting, sandblasting) or by using angle grinders, pin wheels, sandpaper, ect. Then degrease it using Fast Cleaner F-7 or Ultra Fast Degreaser F-6. Always strive for a

thorough removal of impurities and give a large surface roughness.

#### Concrete surface preparation

The concrete surface should be dry, dust removed and cleaned from small concrete parts. New concrete should be cured for at least 28 days and cleaned from "cement wash". Slight surface moisture, is acceptable.

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### Mixing and application of the composition.

Both ingredients should be mixed in company packages to obtain a homogenous mixture using low speed mixers. It is advisable to mix the contents of the entire package. Efforts should be made to the application immediately after preparation of the mixture. Is recommended to apply a layer with a thickness of 0.15 - 0.25 mm.

**The covering complete system consists of a layer of primer coating Chester E1 and Chester Coating E2.** Applications must be carried out at min. 15°C.

### Airless parameters

Pressure	20 - 23MPa
Nozzle	0,015 OR 0,017
Filter the gun	50 mesh

### Coverage rate

Using 1kg of the product you can obtain 4,1 m<sup>2</sup> coat of 0,20 mm thickness.

To cover a surface of 1m<sup>2</sup> of 0,2 mm thickness - you need 0,244 kg of the product.

Values given above are theoretical ones. In practice because of various roughness of the surfaces, decrements, irregularity – efficiency of the product may differ by +/- 15%

### Post curing

Post curing in temperature 70-90°C in minimum 2h, after initial cure considerably improves mechanical properties, heat and chemical resistance. Optimal stability is 7 days at 20 °C and then annealing at 90 °C for 24h

### CURE TIME ACCORDING TO THE TEMPERATURE

Ambient temperature °C (°F)	Time for application [min]
20 (68)	45
30 (86)	25

It should be remembered that the rate of the reaction significantly depends, apart from the ambient temperature, on the quantity of the used material (the bigger mass of the mixed material, the reaction rate increases). The above presented times refer to the mass of 0.25 kg of the composite.

### CHEMICAL RESISTANCE

samples were subjected to thermal stabilization. If not stated otherwise tests were carried at the temperature of 20°C(68°F)

#### The data in Table apply to complete system (E1 + E2)

- 1 – Prolonged immersion
- 2 – Short-term immersion
- 3 – Not recommended

Solvent	Chemical resistance
Petrol	1
Diesel fuel	1
Coolant	1
Motor oil	1
Petroleum	1
Nitric acid 10 %	2
Phosphoric acid 10%	2
Acetic acid 5%	3
Amines up to 20%	1
Hydrochloric acid 10%	1
Ammonia 20%	1
Water 85°C	1
Sea water	1
Sodium hydroxide 40%	1
Ethyl acetate	1
Methylene Chloride	1
MEK	1

Full table of chemical resistance is on the website

### OTHER INFORMATION

#### Storage

The product should be stored in original packaging at temperature between +0°C (32 °F) to +30°C (86 °F).