

Chester Surface Protector D

DESCRIPTION:

Chester Surface Protector D is a two-element **liquid** epoxy-ceramic composite. Contains modified epoxy resins, ceramic, and quartz fillers. Coating systems for protecting metals from the effects of erosion, cavitations, corrosion and bonding metal surfaces. The ceramic-filled epoxy coating cures at room temperature.

TYPICAL APPLICATION:

- MANHOLES
- TANKS
- FLOORS
- PIPELINE COATINGS
- CORROSION PROTECTION OF METAL AND CONCRETE SURFACES
- MARINE BUOYS
- EFFLUENT TANKS AND CHANNELS

Technical data

Cured Density	----	----	1,3 g/cm³	
Mix Ratio by Volume	----	----	whole pack	
Mix Ratio by Weight	----	----	4 : 1	
Color			(grey-cream/grey /light grey /blue/ green)	
Tensile Shear (Stainless Steel)	ASTM 1002	ISO 4587	22,1 MPa	3205 psi
Tensile Shear (Mild Steel)	ASTM 1002	ISO 4587	22,1 MPa	3205 psi
Tensile Shear (Aluminum)	ASTM 1002	ISO 4587	12,5 MPa	1810 psi
Tensile Shear (Brass)	ASTM 1002	ISO 4587	11 MPa	1595 psi
Temperature Resistance Wet	----	----	60°C	140°F
Temperature Resistance Dry	----	----	100°C	212°F
Minimal Working Temperature	----	----	-50°C	-58°F
Working Life (68°F)(20°C)	----	----	55 min	
Cured Hardness	ASTM D2240	----	58° Sh D	
Abrasion resistance	----	ISO 7784-2;disk H10;loading ca. 1kg	15,8 mm³	
Recoat time	----	-----	3-16 h	
Curing time in 20 °C			min. 24h	

DIRECTIONS FOR USE

Conditions during the application.

The product is not recommended to apply when the ambient temperature is below 8°C(46°F) and the relative humidity is above 90% or when condensation occurs on the surface to be repaired.

Metal surface preparation.

The surface in the part to be repaired shall be chemically degreased or by using gas burner and mechanically cleaned by means of shot blasting, sandblasting, or using angle grinders, grinding pins,

abrasive paper etc. Always seek to thoroughly remove all loose contamination and make the surface roughened. A correctly prepared surface shall be degreased once again using for ex. Chester Fast Cleaner F-7 or Chester Ultra Fast Degreaser F-6.

Concrete surface preparation

The concrete surface should be dry, dust removal and cleaned from small concrete parts. New concrete must not have more than 28 days, and cleaned from "cement wash". Light precipitation of surface is allowed.

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Mixing and application of the composition.

Use two different spatulas to take the Base and the Reactor. Both components should be mixed on an even smooth surface or in the original packaging until obtaining a uniform color and then, if necessary, add a dye to obtain the assumed color. The application should be instantly after the preparation of the mixture. It is recommended to apply 2 layers of material with a thickness of 0.30 mm each. When applying the second layer, the first can't be fully cured. Apply the material with a brush or spatula.

Coverage rate

Using 1kg of the product you can obtain 1,28 m² coat of 0,6 mm thickness.

To cover a surface of 1m² of 0,6mm thickness - you need 0,78 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 60-80°C (140-176°F) in minimum 2h, after initial cure considerably improves mechanical properties, heat and chemical resistance.

CURE TIME ACCORDING TO THE TEMPERATURE

Ambient temperature °C (°F)	Time for application [min]
5 (41)	120
10 (50)	80
20 (68)	55
30 (86)	40

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

Tests were carried at the temperature of 20°C (68°F). The tests were carried after 7 days of curing at the temperature of 20°C (68°F).

- 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%	1
Sulfuric acid 15%	1
Acetic acid 5%	2
Amines	1
Hydrochloric acid 15%	1
Ammonia 20%	1
Water 60°C(140 °F)	1
Sea water	1
Ozone (dry)	1
Chlorine	1
Sodium hydroxide 40%	1
Potassium hydroxide 40%	1
Methylene chloride	3

Full table of chemical resistance is on the website
<http://www.chester.com.pl/GBA/multimedia/2/51/>

OTHER INFORMATION

Color

Grey-cream

Dyes

In addition, the offered dyes enable to obtain the colors mentioned below :

Light grey

Grey

Green

Blue

Storage

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