

## Chester Surface Protector CK

### DESCRIPTION:

Chester Surface Protector CK is a two-element thixotropic epoxy-ceramic composite. Contains modified epoxy resins and abrasion resistant ceramic aggregates. Coating systems for protecting, repairing or modify surfaces subjected to particulate abrasion and erosion. The ceramic-filled epoxy coating cures at room temperature.

### TYPICAL APPLICATION:

- HOPPERS
- CHUTES
- CYCLONES
- PIPE ELBOWS
- CENTRIFUGES
- IMPELLERS
- SCREW CONVEYORS
- WEAR PLATES
- PUMPS
- VALVES

### Technical Data

Cured Density	-----	-----	<b>2,65 g/cm<sup>3</sup></b>	
Mix Ratio by Volume	-----	-----	<b>4 : 1</b>	
Mix Ratio by Weight	-----	-----	<b>8,5 : 1</b>	
Color				<b>brown</b>
Tensile Shear (Stainless Steel)	ASTM 1002	ISO 4587	<b>21,1 MPa</b>	<b>3060 psi</b>
Tensile Shear (Mild Steel)	ASTM 1002	ISO 4587	<b>20,5 MPa</b>	<b>2975 psi</b>
Tensile Shear (Aluminum)	ASTM 1002	ISO 4587	<b>10,5 MPa</b>	<b>1525 psi</b>
Tensile Shear (Brass)	ASTM 1002	ISO 4587	<b>10,0 MPa</b>	<b>1450 psi</b>
Temperature Resistance Wet	-----	-----	<b>80°C (-50°C)</b>	<b>176°F (-58°F)</b>
Temperature Resistance Dry	-----	-----	<b>150°C (-50°C)</b>	<b>302°F (-58°F)</b>
Minimal Working Temperature	-----	-----	<b>-50°C</b>	<b>-58°F</b>
Working Life (68°F)(20°C)	-----	-----	<b>35 min</b>	
Cured Hardness	ASTM D2240	-----	<b>87°Sh D</b>	
Abrasion Resistance	-----	ISO 7784-2; shield H10; load 1kg	<b>2,5 mm<sup>3</sup></b>	

### DIRECTIONS FOR USE

#### Conditions during the application.

The product is not recommended to apply when the ambient temperature is below 4°C(39°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 mechanically cleaned by means of blast cleaning, sanding, or with the help of the abrasive paper, grinders, pin-lift grinding wheels, etc. You should always aim at thoroughly remove all loose contamination and make the surface roughened. A correctly prepared surface shall be degreased using for ex. Chester Fast Cleaner F-7 or Chester Ultra Fast Degreaser F-6.

#### Mixing and application of the composition.

Use two different spatulas to take the Base and the Reactor. Mix both components until obtaining a uniform color. It is recommended to mix total content of the packaging. It is the best to place the necessary coat at once, carefully rubbing it into the base.

Once the mix was prepared it should be directly applied, because curing starts immediately and every late could weaken the adhesion..

The coat of 2 - 5 mm thickness is recommended for applying.

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### Coverage rate

Using 1kg of the product you can obtain 0.11 m<sup>2</sup> coat of 3.5 mm thickness.

To cover a surface of 1m<sup>2</sup> of 3.5mm thickness - you need 9.3 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 80- 100°C 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)	60
10 (50)	45
20 (68)	30
30 (86)	20

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
Brake fluid	1
Motor oil	1
Petroleum	1
Nitric acid 10%	1
Phosphoric acid 10%	1
Acetic acid 5%	1
Amines up to 20%	1
Hydrochloric acid 10%	1
Ammonia 20%	1
Water 80°C	1
Sea water	1
Sodium hydroxide 40%	1
Acetone	3
Methylene Chloride	3

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

### OTHER INFORMATION

#### Storage

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