

Chester Surface Protector C

DESCRIPTION:

Chester Surface Protector C is a two-component, thixotropic epoxy-ceramic composite. Contains modified epoxy resins and abrasion-resistant ceramic fillers and corundum aggregate. A covering system for the protection, repair or modification of surfaces exposed to particularly high abrasion and erosion. Cures at room temperature.

TYPICAL APPLICATION:

- PROTECTION OF CHUTES
- PROTECTION OF PIPE ELBOWS
- CENTRIFUGES PROTECTION
- PROTECTION OF AGITATORS
- PROTECTION OF PUMPS
- SCREW CONVEYOR PROTECTION
- PROTECTION OF CYCLONES
- HOPPERS PROTECTION

Technical Data

Cured Density	-----	-----	2,6 ± 0,05 g/cm³	
Mix Ratio by Volume	-----	-----	4 : 1	
Mix Ratio by Weight	-----	-----	8,5 : 1	
Color	brown			
Tensile Shear (Stainless Steel)	ASTM 1002	ISO 4587	21,1 MPa	3060 psi
Tensile Shear (Mild Steel)	ASTM 1002	ISO 4587	20,5 MPa	2975 psi
Tensile Shear (Aluminum)	ASTM 1002	ISO 4587	10,5 MPa	1525 psi
Tensile Shear (Brass)	ASTM 1002	ISO 4587	10,0 MPa	1450 psi
Temperature Resistance Wet	-----	-----	80°C	176°F
Temperature Resistance Dry	-----	-----	150°C	302°F
Minimal Working Temperature	-----	-----	-50°C	-58 °F
Working Life (68°F)(20°C)	-----	-----	35 min	
Hardness	ASTM D2240	-----	87 Sh D	
Abrasion Resistance	-----	ISO 7784-2; wheel H10; load 1kg	2,5 mm³	

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.

From the surface to be protect you need to delete all kinds of impurities, grease, oil, loose corrosion products, old paint coatings. For pre-cleaning is recommended to use the product Cleanrex, Cleanrex II, Fast Cleaner F-7. The surface of the part to be repaired should be degreased chemically or with a gas burner and mechanically cleaned - by shot blasting, sandblasting or with the use of angle grinders, pin grinding wheels, sandpaper, etc. and then if necessary

degrease using the e.g. Chester Fast Cleaner F-7 or Ultra Fast Degreaser F-6. Always strive to thoroughly remove surface contamination and make the surface well roughened.

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 original packaging until a uniform color is obtained. Efforts should be made to apply immediately after preparing the mixture, because the curing reaction starts immediately and any delay reduces the adhesion. The recommended thickness of the applied layer is 3 - 5 mm.

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Coverage rate

Using 1kg of the product you can obtain 0,1 m² coat of 4 mm thickness.

To cover a surface of 1m² of 4mm thickness - you need 10,4 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 $\pm 15\%$

Post curing

Post curing at a temperature of 80-100°C (176-212°F) for minimum 2h, after initial cure considerably improves mechanical properties, heat and chemical resistance. Optimal curing process: 7 days in 20°C (68°F) and post-curing at 100°C (212°F) for 2 hours.

CURE TIME ACCORDING TO THE TEMPERATURE

Ambient temperature °C (°F)	Working life [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

The tests were carried out at a temperature of 20 °C (68°F). The samples were cured for 7 days at 20 °C (68°F).

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

Solvent	Chemical resistance
Petrol	1
Diesel fuel	1
Antifreeze	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

OTHER INFORMATION

Storage

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