

Chester Surface Protector BS

DESCRIPTION:

Chester Surface Protector BS is a two-element **thixotropic** epoxy-ceramic composite. It contains modified epoxy resins, and abrasion resistant fillers in the form of white beads. The covering system for protecting, repairing or modify surfaces subjected to particularly severe abrasion and erosion. Very high resistance to compression. High chemical resistance. Cures at room temperature.

TYPICAL APPLICATION:

- PUMP PROTECTION
- CYCLONE PROTECTION
- KNEE PIPES PROTECTION
- CENTRIFUGES PROTECTION
- MIXERS PROTECTION
- SCREW CONVEYOR PROTECTION
- CHUTE PROTECTION
- HOPPERS PROTECTION

Technical data

Cured Density	----	----	2,23±0,05 g/cm³	
Mix Ratio by Volume	----	----	4:1	
Mix Ratio by Weight	----	----	5 : 1	
Color			Light gray	
Tensile Shear (Stainless Steel)	ASTM 1002	ISO 4587	22,5 Mpa	3265 psi
Tensile Shear (Mild Steel)	ASTM 1002	ISO 4587	22,0 Mpa	3190 psi
Tensile Shear (Aluminum)	ASTM 1002	ISO 4587	12,5 Mpa	1815 psi
Tensile Shear (Brass)	ASTM 1002	ISO 4587	11,0 Mpa	1595 psi
Temperature Resistance Wet	----	----	80°C	176°F
Temperature Resistance Dry	----	----	120°C	248°F
Minimal Working Temperature	----	----	-50°C	-58°F
Working Life (68°F)(20°C)	----	----	40 min	
Cured Hardness	ASTM D2240	ISO R868	93°C ShD	

DIRECTIONS FOR USE

Conditions during the application.

The product is not recommended to apply when the ambient temperature is below 10°C (50°F) and the relative humidity is above 90% or when condensation occurs on the surface to be repaired.

Metal surface preparation.

Remove all kinds of pollution, grease, oils, loose corrosion products, old coatings ect. form the surface in the part to be repaired. For pre-wash, it is recommended to use Chester washing preparations. Elements, working earlier in the oil,

should be burned with a gun or a gas burner. So prepared surface should be grind, whenever possible blast (blasting, sandblasting) or with the help of the angle grinders, pin shafts, sandpaper etc. and then degrease using Fast Cleaner F-7 or Chester Ultra Fast Degreaser F-6. You should always aim at thoroughly remove all loose contamination and make the surface roughened.

Mixing and application of the composition.

Use two different spatulas to take the Base and the Reactor. Both components should bemixed on equal smooth surface or in original package to get a uniform color. until obtaining a uniform color. Once the mix

was prepared it should be directly applied, because curing starts immediately and every late could weaken the adhesion. Recommended layer is 1,5mm.

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Coverage rate

Using 1kg of the product you can obtain 0,3 m² coat of 1,5 mm thickness.

To cover a surface of 1m² of 1,5 mm thickness - you need 3,35 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 for minimum 2h, after initial cure considerably improves mechanical properties, heat and chemical resistance. The optimum stabilization is 7 days at a temperature of 20°C and then annealing at 100°C for 2 h.

CURE TIME ACCORDING TO THE TEMPERATURE

Ambient temperature °C (°F)	Time for application [min]
10 (50)	60
20 (68)	40
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

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

Medium	Chemical Endurance
gasoline	1
diesel	1
coolant	1
engine oil	1
oil	1
Nitric acid 10%	2
Phosphoric acid 10%	2
Acetic acid 5%	2
amines	2
Concentrated hydrochloric acid	1
Ammonia 20%	1
water 80 ° C	1
seawater	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

Colors/dyes

The product should be stored in original packaging at temperature between +0°C (32 °F) to +40°C (104 °F).