

Chester Surface Protector YF

DESCRIPTION:

Chester Surface Protector YF is a two- part liquid epoxy-metallic coating system. The material contains modified epoxy resins, metal and ceramic fillers. It is particularly recommended for underwater coating (curing under water) and applications on wet surfaces

TYPICAL APPLICATION:

- PROTECTION OF PIPELINES
- SECURING STORAGE TANKS
- REGENERATION OF THRUSTERS
- REBUILDING OF KORT NOZZLE/ DUCTED PROPELLER
- COATING PARTS UNDER WATER
- COATING SHIPS HULLS, SUBMERGED STRUCTURES

Technical Data

Cured Density	----	----	1,4 g/cm³	
Mix Ratio by Volume	----	----	Whole package	
Mix Ratio by Weight	----	----	2,8 : 1	
Color			gray	
Tensile Shear (Stainless Steel)	ASTM 1002	ISO 4587	19.1 MPa	2770 psi
Tensile Shear (Mild Steel)	ASTM 1002	ISO 4587	19.1 MPa	2770 psi
Tensile Shear (Aluminum)	ASTM 1002	ISO 4587	12.0 MPa	1740 psi
Tensile Shear (Brass)	ASTM 1002	ISO 4587	11.0 MPa	1595 psi
Temperature Resistance Wet	----	----	90°C	
Temperature Resistance Dry	----	----	180°C	
Minimal working temperature	----	----	-50°C	
Heat Distortion Temperature Ambient Cure Post Cure	ASTM D648	----	59°C 80°C	
Heat Distortion Temperature Ambient Cure Post Cure	----	DIN 53462	55°C 71°C	
Working Life (20°C) (68°F)	----	----	50 min	
Cured Hardness	ASTM D2240	ISO R868	80°Sh D	
Compressive Strength	ASTM D695	ISO 604	120 MPa	17400 psi
Thermal conductivity coefficient	----	----	0.56 W/mK	
Flexural strength	----	ISO 178	92 MPa	13340 psi
Modulus of elasticity	----	----	8560 MPa	1,24x10⁶ psi
Impact strength	----	ISO 179	6.3 kJ/m²	

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DIRECTIONS FOR USE

Conditions during the application.

The product is not recommended to apply when the ambient temperature is below 10°C

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..

Two coats of 0,6-1,2 mm thickness are recommended for applying. Whereas the second coat of the material applying the first one can not to be fully cured. Recommended is using of brush or roller for applying this material.

Applications must be carried out at a temperature above 10 ° C.

Coverage rate

Using 1kg of the product you can obtain 0,79m² coat of 0,9mm thickness. To cover a surface of 1m² of 0,9mm thickness - you need 1,26 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%

COURSE OF CURING

Heating at a temperature of 80-100 ° C for a minimum of 2 hours after initial cure, substantially maintains the mechanical properties. Optimal stabilization after 7 days in Temp. 20 ° C and then heating at 100 ° C for 24 hours

TEMPERATURE EFFECT ON CURING TIME

Ambient temperature [°C]	Time for application [min]
10	70
20	50
30	35

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
Nitrous acid 10%	1
Acetic acid 5%	2
Amines	1
Hydrochloric acid 10%	1
Ammonia 20%	1
Water 120°C(248°F)	1
Sea water	1
Ozone (dry)	1
Chlorine	1
Acetone	3
Methylene Chloride	3

Full table of chemical resistance is on the website <http://www.chester.com.pl/POL/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).