Chester Epoxy SL

PRODUCT DESCRIPTION

Chester Epoxy SL is a two-component composition of epoxy resins without solid fillers.

TYPICAL APPLICATION

Connecting elements exposed to deformation. Bonding metal with metal and rubber. Pouring components to achieve mechanical protection and protection against moisture.

PROPERTIES OF NOT CURED MATERIAL (AFTER MIXING)

Consistence	liquid
Density [g/cm] at 25 °C	1.15
Color	light bronze
Mixing proportions:	(Base: Reactor)
weight	1 : 1
volume	1 : 1

CURING PROCESS

Maximal utility time after mixing hours (in 20 °C)	3.5
Time for the mechanical working hours (in 20 °C)	16
Full chemical resistance	
(in 20 °C)	after 7 days
(in 40 °C)	after 14 days

Influence of the temperature upon the curing reaction time.
The heating in the range of temperatures 80–100C during ca. 2 hours after the hardening considerably increases values of strength parameters. It should be remembered that the speed 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 quicker the reaction proceeds). The above presented times refer to the mass of 0.25 kg of the composite.

PHYSICAL PROPERTIES OF THE CURED MATERIAL

Maximal instant chemical resistance[°C]	200
Maximal working temperature [°C]	120
Minimal working temperature [°C]	-50
Shear strength for a steel base [MPa]	18,6

(acc. to ISO 4587)

Conditions during the application.

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

Surface preparation.

The surface in the part to be repaired shall be degreased chemically or by gas-jet, mechanically cleaned by 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 elements on the flat smooth surface or mix them in original packages 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. Necessary layer should be placed single, carefully rubbing it into the base. In case there is necessary second layer, first shouldn't be fully cured, otherwise there should be made rough surface. In the case of repairs of cracks, it is recommended to additionally reinforce the composite with a steel mesh or fiberglass net.

Post curing

Post curing in temperature 80-110°C (176-230°F) in minimum 2h, after initial cure considerably improves mechanical properties, heat and chemical resistance. The optimal stabilization is 24h. at 20°C + heating 2 hours at 80°C.

CURE TIME ACCORDING TO THE TEMPERATURE

Ambient temperature °C (°F)	Time for application [min]
10 (50)	240
20 (68)	210
30 (86)	120

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
Paraffin	1
Nitric acid 10%	1
Nitrous acid 10%	1
Acetic acid 5%	2
Amines	1
Hydrochloric acid 10%	1
Ammonia 20%	1
Water 100 °C(212 °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/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).