chester molecular ®

Technical Data Sheet

February 2016

Chester Elastomer 85T

DESCRIPTION:

Chester Elastomer 85T is a two component polyurethane liquid chemically-curable material. It is designed to protect metal surfaces from wear and repair coatings and rubber components. The product contains 100% solids. Cures at room temperature.

TYPICAL APPLICATIONS

Reconstruction of rubber conveyor belts and rollers. Making custom gaskets and seals. Regeneration of rubberised body and pump impellers. Securing chutes, fans, cyclones, screw conveyors. Securing pumps for hydraulic transport of gravel, lime milk, slag, coal.

PROPERTIES OF UNCURED MATERIAL - AFTER MIXING

Consistency	thixotropicColor
black	
The mixing ratio	
(Base: Reactor)	the whole package

CURING

Maximum working life calculated from the time of use combination of	
the two components (at 20 °C)	6 min.
Time to 80% of the parameters	
mechanical (at 20 ° C)	3 hours.
Time to get the full performance	
mechanical (at 20 ° C)	16 hours.
Full chemical resistance (at 20 ° C)	after 7 days

PHYSICAL AND STRENGTH PARAMETERS OF CURED PRODUCT

Maximum operating temperature (dry)	120°C
Max operating temperature (wet)	80°C
Minimum operating temperature	-50°C
Density at 25°C [g/cm3]	1.19
Hardness (DIN 53505)	85^{O}SHA
Dielectric strength	
(according to IEC 243-1)	19 kV / mm
Elongation at break	
(by ASTM412-61T)	300%
Tensile strength	
(according to ISO R1798)	30 MPa
Shear strength of the substrate	
steel with ground EL10M	
(according to ISO 4587)	9,8 MPa

USAGE

Conditions at the time of application.

The product should not be used at temperatures below 5°C or relative humidity above 90% and in conditions where condensation occurs on the surface to be repaired.

Preparing of the surface.

You need to degrease metal surface and mechanically clean it - by sandblasting or using grinders, pin grinding wheels, etc. You should always strive to thoroughly remove impurities and make the surface rough. A properly prepared surface should be degreased again using e.g. Chester Fast Cleaner F-7.

Rubber surfaces after cleaning and degreasing should be roughen using specialized tools (special wire brushes, scrapers, etc.) or sandpaper grain size 16-80. The prepared surface should be degreased again. Prior to the application on certain types of rubber it is recommended to use Chester Primer EL 20M. Application on metal surfaces requires the use of Chester Primer EL 10M. The area prepared for the application must be dry.

Mixing and application of elastomer.

After opening the two containers mix a little bit them separately and then pour the liquid from smaller into the bigger container and mix vigorously for a 1 minute. Then pour the product on flat, dry and clean surface (e.x. hard, stiff foil) and vent. This is done by distributing the mixture with a spatula in a thin layer and removal of the air from it.

Leaving the mixture in this form prolongs the shelf life. Application should begin immediately after the preparation of the mixture and finish as soon as possible - best results are achieved with this method.

First layer of elastomer must be thoroughly rubbed into the ground. Every next layer should be as thick as possible. This will allow the air to flow out from the material. In case of regenerating the crack, we recommend to use additional reinforcement like steel mesh or fiberglass.

When securing surface we recommend to apply a coating having a thickness of 0.8-1.6 mm with a thickness of 2-4 layers of about 0.4 mm each. When repairing holes and torn the product is applied to the desired thickness.

Performance.

From 1 kg of the product obtained 0.7 m^2 coating with a thickness of 1.2 mm, i.e. 1m^2 shell thickness of 1.2 mm required 1.43 kg of product. The above figures are calculated theoretically. In practice, due to the different roughness of the surface, pitting, inequality as deviations from the assumed thickness of the coating, actual performance may vary +- 15%.

CHEMICAL RESISTANCE

Medium	Chemical resistance
Hydrochloric acid 10 %	1
Nitrous acid 10%	1
Acetic acid 10%	2
Formic acid 10%	2
Sulphuric acid 10%	1
Saturated solution NaCl 80^{o}C	1
Calcium hydroxide	1
Seawater	1
Mineral oil	2
Oxygen	3
Chlorine	3

1 - Contact continuously
2 - Short-term
3 - not recommended

Unless stated otherwise, the tests were carried out at 20^{o}C. Tests were carried out after 168 hours at 20° C curing. Full table of chemical resistance is on the website of the company and from authorized representatives.

OTHER INFORMATION

The product should be stored in original packaging at a temperature of 10°C to 40°C.

In the case of exposure to a temperature of less than 10°C is required to anneal the product at temperatures down 80°C for 2h or storing it at room temperature for a minimum of 7 days

Warning!

The temperature of the elastomer during the mixing and application must be 20 ° C - 25 ° C.

ISO 9001:2000