

## TEROSON EP 5055

July 2014

### PRODUCT DESCRIPTION

<b>Technology</b>	Epoxy Resin
<b>Additional Information</b>	2-component solvent free toughend epoxy resin

TEROSON EP 5055 is a solvent free, two component adhesive, based on toughened Epoxy resins. The material has a very good adhesion to e.g.:

- bare metal
- aluminum alloys
- zinc coated steels
- E-coated panels

By heating up both components the chemical reaction will accelerate. TEROSON EP 5055 will cure at room temperature. Curing can be accelerated by increasing the temperature. It is free of isocyanate and silicones. The cured adhesive film is hard, but not brittle.

### APPLICATION AREAS

It is special designed for bare steel, zinc coated steels and aluminum alloys used in the automotive industry or body repair shops, where high strength and corrosion protection properties are required.

### TECHNICAL DATA

(Typical Test Results)

#### PART A

Base	Epoxy Resin
Colour	black
Density	approx. 1.0 g/ml
Viscosity	approx. 145 Pa.s
Measuring equipment	Physika UDS 200
Measuring system	plate/plate Ø 20 mm
Shear rate	10 s <sup>-1</sup>
Temperature	23 °C

#### PART B

Base	Amine
Colour	grey-green
Density	approx. 1.1 g/ml
Viscosity	approx. 75 Pa.s
Measuring equipment	Physika UDS 200
Measuring system	plate/plate Ø 20 mm
Shear rate	10 s <sup>-1</sup>
Temperature	23 °C

Mixing ratio A:B  
by volume

1:1

#### Mixture (PART A+B)

Colour	dark grey
Odour	almost without odour
Solids	100 %
Curing times	
initial strength	approx. 4 h at 23 °C
final strength	approx. 2 d at 23 °C or 30 minutes at 100 °C object temperature
Shear strength (based on DIN EN 1465)	
cured at ambient temperature	18 to 22 MPa
cured at elevated temperature	> 20 MPa
Peel test (DIN EN ISO 11339)	
Steel, 0.2 mm thick layer (7 d at 23 °C, 50 % rh)	>4 N/mm
E-Modulus	1,500 MPa

### PRELIMINARY STATEMENT

Prior to application it is necessary to read the **Safety Data Sheet** for information about precautionary measures and safety recommendations. Also, for chemical products exempt from compulsory labeling, the relevant precautions should always be observed.

### PRETREATMENT

The surfaces must be dry and free of oil, grease and dust. For pretreatment of the application area / surface use TEROSON VR 10 / VR 20. Grinding surface may improve adhesion, dependent on substrate. After pretreatment we recommend on bare steel or bare aluminium a surface conversion with BONDERITE M-NT 1455-W.

### APPLICATION

TEROSON EP 5055 is processed from universal cartridges with manual application tools (guns driven by hand, air pressure or battery). Only use cartridge pistols that are equipped with a piston rod. Prior to screwing the static mixer, a small amount of the material should be pressed out to ensure that both components are passed on simultaneously. After mixing, the adhesive is ready for use and must be processed within 80 min, since viscosity increases when curing starts. In order to avoid the bonded parts being displaced, it is recommended that they should always be fixed during the process of curing. The processing time depends on the temperature.

### CURING

TEROSON EP 5055 cures without additional exterior heat only by chemical reaction after mixing component A and B at room temperature. Accelerated curing at 60 °C object temperature for 60 minutes is possible (e.g. infrared heaters).

### CLEANING

Fresh, uncured material can be removed with TEROSON VR 20. Cured adhesive can only be removed mechanically.

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**STORAGE**

Frost sensitive	under certain conditions (may cristalize, reversible > 40 °C)
Recommended storage temperature	15 to 25 °C
Shelf life	12 months in original packaging

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