

TEROSON EP 5065

July 2019

PRODUCT DESCRIPTION

Technology	Epoxy Resin / Amine
Additional Information	structural bonding material 2-component solvent free impact-resistant

TEROSON EP 5065 is a solvent free, two component adhesive, based on Epoxy resins.

It has high final strength both at high and low temperatures (-40°C - 80°C).

Curing can be obtained with both low and high temperature. The cured adhesive film is hard, but not brittle.

Application Areas:

TEROSON EP 5065 is mainly used in car repair for structural bonding of metals when requirements in terms of crash behaviors are high (e.g., car body steel with or without e-coat, galvanized steel and aluminum).

Coated surfaces are protected against corrosion.

Curing can take place at room temperature or be accelerated by the use of additional heat, e.g. IR radiator.

The assembly bonded shall be designed so that the bonded surface or seams are only subjected to tensile or shear forces, but not to peel forces.

It is recommended that bonding should be done with single overlaps.

Uncured adhesive can be spot-welded.

TECHNICAL DATA

(Typical Test Results)

PART A

Base	Epoxy Resin
Colour	black
Density	approx. 1.1 g/ml
Viscosity	approx. 23 Pa.s
Measuring equipment	Physica MCR 301
Measuring system	plate/plate Ø 20 mm
Cross head peel speed	10 s ⁻¹
Temperature	23 °C

PART B

Base	Amine
Colour	grey-green
Density	approx. 1.0 g/ml
Viscosity	approx. 2 Pa.s
Mixing ratio A:B	200 : 100

Mixture (PART A+B)

Colour	black
Odour	almost without odour
Pot life (23°C, 50% rh)	approx. 60 min(s)

Initial strength	after 8 hours (23°C, 50% rh) after approx. 15 minutes (80 °C object temperature)
Curing times	
final strength	approx. 2 d at 23 °C or 30 minutes at 80 °C object temperature
Shear strength (based on DIN EN 1465)	
Steel, 0.2 mm thick layer (7 d at 23 °C, 50 % rh) at 23 °C	25 MPa
Peel test (DIN EN ISO 11339)	
Steel, 0.2 mm thick layer (7 d at 23 °C, 50 % rh)	5 N/mm
E-Modulus	>1,300 MPa

PRELIMINARY STATEMENT

Prior to use 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 substrate should be dry, free from dust, oil, grease and other contaminants.

An improvement of the adhesion can be achieved by grindings or sandblasting of the surface.

Application:

TEROSON EP 5065 is processed from a 2:1 cartridge. Only use cartridge pistols that are equipped with a piston rod. During the storage time and shipment a crystallization of the resin may occur. By heating the adhesive above 60 °C for about 60 minutes this physical process is reversible. All properties stay afterwards on the same level. It is recommended that the adhesive should be used with a minimum temperature of 15 °C. 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. Now, the static mixer is screwed onto it. To ensure proper mixing, discard the first approx. 4 cm of the adhesive bead. After mixing, the adhesive is ready for use and must be processed within 1 hour, since viscosity increases when curing starts. The processing time depends on the temperature. In order to avoid the bonded parts being displaced, it is recommended that they should always be fixed.

Curing:

The bonded parts, which have been fixed by means of a slight pressure applied to them, can be cured at room temperature or higher.

They can be painted over after having reached their final strength.

If suitable equipment for curing at higher temperature (infrared radiator, paint cabin that can be heated to 40 – 80 °C or other equipment) is available, this should always be given preference over curing at room temperature for the following reasons:

- Shorter curing time; further processing or treatment is possible after only 2 hours approx.
- Higher strength is achieved
- Higher resistance of the adhesive bond against chemical loads

Cleaning:

Fresh, uncured material can be removed with TEROSON VR 10. Cured adhesive can only be removed mechanically.

Classification:

Please refer to the corresponding **Material Safety Data Sheets** for details on:

Hazards identification
Transport information
Regulatory information

Storage:

Frost sensitive	under certain conditions (may cristalize, reversible at 60 °C)
Recommended storage temperature	15 to 35 °C
Shelf life	12 months in original packaging

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