TEROSON

TEROSON EP 8021 N

October 2013

PRODUCT DESCRIPTION

Technology	Polymerblend
Product Type	Flange Bonding

TEROSON EP 8021 N is a heat curing, solvent free, one component adhesive based on Epoxy/PVC-Polymerblend. In order to obtain first strengths and wash-off resistance the material should be pregelled. Due to its low viscosity a swirl application is possible even at room temperature. After curing TEROSON EP 8021 N adheres very well on bare metal, zinc coated substrates and also on aluminium alloys. To obtain the final strength of TEROSON EP 8021 N, the curing will take place while passing the EC oven in automotive body shop lines.

APPLICATION AREAS

TEROSON EP 8021 N is primarily used as hem flange adhesive in the automotive body shop.

TECHNICAL DATA
(Typical Test Results)

Uncured	
Colour	white
Density	approx. 1.5 g/cm³
Consistency	pasty
Solids	> 99 %
Viscosity (DIN 54458)	approx. 15 Pa.s
Equipment	P/P 25 mm Ø
Temperature	45 °C
Frequency	10 Hz
Deformation	10 %
Cured (25 min, at 175 °C)	
Material Data:	
E-Modulus	430 MPa
Tensile strength	4.7 MPa
Elongation at break	8 %
Poisson rate	0.38
Shear strength (DIN EN 1465)	> 5 MPa
bonding area	20 x 25 mm
layer thickness	0.3 mm
substrate	HDG/EGS 0.75 mm
Corrosion resistance	
salt spray test (35°C, salt solution 5%, 500 hours)	no loss of adhesion, no corrosion
corrosion test VDA 621-415 (10 rounds)	no loss of adhesion, no corrosion
In service temperature range	-40 to 90 °C

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.

APPLICATION

TEROSON EP 8021 N is applied from pails or drums using high pressure pumps with a compression ratio minimum 50:1. For the best application the use of volume controlled dispensers is preferred. The heated application pistol can be used either manually or on a fixed jig. More commonly is attached to an automatic application system (robot, CNC). The material can be applied by extrusion or by using Swirl or Jet-Stream systems. It is recommended to switch off heating during a shutdown of more than 1 hour. The pressure should be switched off after 15 minutes of non-production. Independent heating circuits should have the lowest temperature at the follower plate and the highest temperature at the application nozzle. To ensure an optimal wetting to the substrate TEROSON EP 8021 N should be applied at elevated temperatures. The material is applied directly to oily sheet metal no more than 3 g/m² . If required, we will provide you with the additional information on suitable application equipment.

Recommended material temperature:

Follower plate and pump:	15 to 25 °C
Temperature at the nozzle:	30 to 40 °C

PREGELLING

The minimum curing gelling temperature is 80 °C. Typical pregelling conditions are 15 min at 140 °C. An induction gelling is also feasible.

CURING

TEROSON EP 8021 N is cured while passing the EC oven, e.g. 15 minutes at 175 °C. The minimum curing cycle is 15 min at 150 °C. These are effective metal temperatures.

CLEANING

Fresh, uncured material can be removed with the aid of ethylacetate or gasoline. Cured adhesive can only be removed mechanically.

STORAGE

Frost sensitive	no
Recommended storage temperature	5 to 25 °C
Shelf life	4 months

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