

## TEROSON® BOND 480

Known as TEROSON® PU 8590  
August 2020

### PRODUCT DESCRIPTION

TEROSON® BOND 480 provides the following product characteristics:

<b>Technology</b>	Polyurethane
Chemical Type	Polyurethane
Appearance (uncured)	Black
Components	One-component – requires no mixing
Viscosity	Paste
<b>Cure</b>	Humidity
<b>Application</b>	Windscreen Adhesive
Environmental temperature at application	-10 to 45°C (14 to 113°F)
Material application temperature	5 to 35°C (41 to 95°F)
In service temperature	-40 to 90°C (-40 to 194°F)
Short exposure (up to 1h)	120°C (248°F)
<b>Safe Drive-Away time with airbag</b>	
Crash Norm FMVSS 212/208 Crash Test 48 km/h, 100% head-on	8 hours
Specific Benefits	<ul style="list-style-type: none"> <li>• OEM approved</li> <li>• Good sag resistance and stringing</li> <li>• High cure rate</li> <li>• Good adhesion to remaining material</li> </ul>

TEROSON® BOND 480 is a one-component polyurethane windscreen adhesive. Both skin formation and curing times are dependent on humidity and temperature. The cure time may vary depending on the joint depth. By increasing the temperature and humidity, the reaction time can be reduced. Low temperature as well as low moisture slows down the process. It has an excellent adhesion to glass, glass with the ceramic coating, encapsulation and to painted surfaces in connection with primer / activator. Typical applications include the bonding of front, rear and side screens to the body of passenger-, utility-, special- and rail vehicles.

### TYPICAL PROPERTIES OF UNCURED MATERIAL

Specific Gravity @ 23°C 1.25

### TYPICAL CURING PERFORMANCE

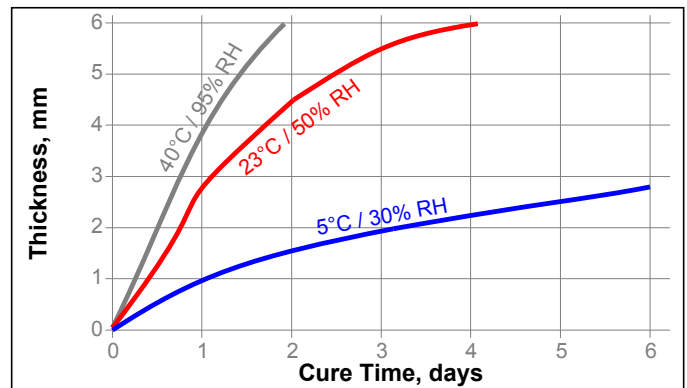
Cure rate for 24 hours, mm 3  
DIN 50014 @ 23°C/50%RH

Glazing time, minutes 25  
(from material application to inserting of the pane)

### Cure vs. Humidity vs. Temperature

As the graph below shows, the humidity and temperature have an influence on the cure rate of the windscreen adhesive.

### Cure Speed



This is also reflected in the safe drive away time for this adhesive, which is shorter in the summer and longer in the winter.

### TYPICAL PERFORMANCE OF CURED MATERIAL

Cured for 7 days @ 23°C, 50% RH

#### Physical properties

Shore hardness, Durometer A 55  
DIN 53505  
Elongation at break, % 400  
DIN 53504  
Tensile strength N/mm<sup>2</sup> 8.5  
DIN 53504 (psi) (1,200)

#### Adhesive properties

Glass, layer thickness 5mm  
DIN 54451  
Lap shear strength 24 hours N/mm<sup>2</sup> 2  
(psi) (290)  
full cure N/mm<sup>2</sup> 5.5  
(psi) (800)  
Lap shear modulus N/mm<sup>2</sup> 1.2  
(psi) (180)

## GENERAL INFORMATION

**This product is not recommended for use in pure oxygen and/or oxygen rich systems and should not be selected as a sealant for chlorine or other strong oxidizing materials.**

**For safe handling information on this product, consult the Safety Data Sheet (SDS).**

## Direction For Use

### Important

For application of primers, fillers, primer fillers, paints or other coatings, technical guidelines from manufacturers have to be considered and followed.

### Pre-treatment

1. The substrate to be bonded must be dry and free from oil, dust, grease and other contaminations.
2. Check the new windscreen for damages or scratches and make sure it fits.
3. To obtain an optimal adhesion on the new screen we recommend 2 different surface preparation methods (solvent-based, TEROSON® VR 10 or water-based, TEROSON® BOND GLASS CLEANER):

#### Solvent-based Cleaning Process:

- a. Wipe off surface with a lint free cloth and TEROSON® VR 10.
- b. Abrade bond line with a smooth abrasive pad or wetted TEROSON® BOND SPONGE.
- c. Wipe off surface again with a lint-free cloth and TEROSON® VR 10.

Or

#### Water-based Cleaning Process:

- a. Clean surface with TEROSON® BOND GLASS CLEANER
- b. Abrade bond line with wetted TEROSON® BOND SPONGE.
- c. Apply TEROSON® BOND GLASS CLEANER again and dry off the bond line in one direction using a lint free cloth.

4. Wait at least 2 minutes after the cleaning process to allow all remaining residues to evaporate.
5. Cleaning of the cut adhesive layer remaining on the window aperture is in general not necessary. If, however, cleaning of this remaining layer is needed, an evaporation time of at least 2 minutes is mandatory.

### Priming

1. Before opening the TEROSON® BOND ALL-IN-ONE-PRIMER bottle, shake well (at least 1 minute).
2. Apply primer with wool dauber in one pass on the bond line (allow to flash off for 2 minutes).
3. Within the first 2 hours after cutting back the old adhesive bead in the body frame, it does not need to be primed. But if the replacement takes longer than 2 hours,

the old cut bead needs to be activated with TEROSON® BOND ALL-IN-ONE PRIMER. NOTE: Provided that it is not contaminated with dust or grease, the old cut adhesive bead is the best adhesive surface for the TEROSON® BOND 480 adhesive.

4. If windows are bonded which have been pre-coated with a primer or PU-based adhesive/sealant by the glass supplier, TEROSON® BOND ALL-IN-ONE-PRIMER is also suitable to ensure the correct adherence of TEROSON® BOND 480 to the pre-coating.
5. Using a wool dauber, a thin layer of TEROSON® BOND ALL-IN-ONE-PRIMER is applied to the pre-coating. Allow to flash off for 2 minutes. Subsequently, TEROSON® BOND 480 is applied as usual, but taking into consideration the layer thickness of the pre-coating.

### Application

1. The windscreen adhesive TEROSON® BOND 480 is best applied both in cartridge and foil pack using commercial equipment such as hand, battery driven or air-pressure dispensers with a piston rod.
2. The Safe Drive-Away Time of TEROSON® BOND 480 must be respected.

### Storage

Store product in the unopened container in a dry location. Storage information may also be indicated on the product container labelling.

**Optimal Storage: 15 to 25 °C. Storage below 5 °C or greater than 25 °C can adversely affect product properties.**

Material removed from containers may be contaminated during use. Do not return product to the original container. Henkel Corporation cannot assume responsibility for product which has been contaminated or stored under conditions other than those previously indicated. If additional information is required, please contact your local Henkel representative.

### Product Specification:

The technical data contained herein are intended as reference only and are not considered specifications for the product. Product specifications are located on the Certificate of Analysis or please contact Henkel representative.

### Approval and Certificate:

Please contact Henkel representative for related approval or certificate of this product.

### Data Ranges

The data contained herein may be reported as a typical value. Values are based on actual test data and are verified on a periodic basis.

Temperature/Humidity Ranges: 23 °C / 50% RH = 23±2 °C / 50±5% RH.

### Conversions:

$(^{\circ}\text{C} \times 1.8) + 32 = ^{\circ}\text{F}$   
 $\text{kV/mm} \times 25.4 = \text{V/mil}$   
 $\text{mm} / 25.4 = \text{inches}$   
 $\mu\text{m} / 25.4 = \text{mil}$   
 $\text{N} \times 0.225 = \text{lb}$

N/mm x 5.71 = lb/in  
 N/mm<sup>2</sup> x 145 = psi  
 MPa x 145 = psi  
 N·m x 8.851 = lb·in  
 N·m x 0.738 = lb·ft  
 N·mm x 0.142 = oz·in  
 mPa·s = cP

**Note:**

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