Technical Data Sheet

LOCTITE® PU EV 9785

May 2025

Product description

LOCTITE® PU EV 9785 provides the following product characteristics:

Technology	1C polyurethane gasket adhesive
Chemical type	Polyurethane
Appearance (uncured)	Black
Components	One component – requires no mixing
Cure	Humidity
Application	EV battery housing gasketing
Environmental temperature at application	-10 to 45°C
Material application temperature	5 to 35°C
In service temperature	-40 to 90°C
Short exposure (up to 1 hr)	120°C
Specific benefits	• Superior sealing performance • Superior bonding strength • Rapid and precise gasketing application

LOCTITE® PU EV 9785 is a one-component polyurethane battery housing 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 and low humidity each slow down the curing process.

LOCTITE® PU EV 9785 has excellent adhesion to aluminum and various composites typically used for battery pack housings, as well as steel battery housing constructions when used in connection with primer/activator. Typical applications include EV battery housing sealing.

Typical properties of uncured material

Density, g/cm^3	~1.24
Solids, %	100
Odor	weak
Shelf-life, aluminum cartridge, months	18

Typical curing performance

Cure rate for 24 hours, mm DIN 50014 @ 23°C/50%RH	~3
Volume change, % DIN 52451	<1
Time to assemble*, minutes, maximum	25

*Period of time between beginning of material application until closing battery housing.

Typical performance of cured material

Physical properties

Shore hardness, Durometer A DIN53505	~55
Elongation at break, % DIN53504	~400
Tensile strength N/mm^2 DIN53504	~8.5
Stress, @100 el%, MPa DIN 53504	~2.5
Shear modulus, MPa DIN 53504	~1.2
Shear strength	
After 24 h, MPa DIN 54451	2
Layer thickness 5mm, fully cured Based on DIN 54451	5 to 6

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 Material Safety Data Sheet.

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 flange for damage or scratches and make sure it fits.
3. To obtain an optimal adhesion on the new battery cover flanges (or one without previous sealant adhered) we recommend TEROSON® VR 10.

Solvent-based cleaning process:

- Wipe off surface with a lint free cloth and TEROSON® VR 10.
- Abrade bond line with a smooth abrasive pad or wetted TEROSON® BOND SPONGE
- Wipe off surface again with a lint-free cloth and TEROSON® VR 10 and let dry approximately 5 minutes.

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 LOCTITE® PU EV 9780 adhesive.
4. If battery housings are bonded which have been pre-coated with a primer or PU–based adhesive/sealant, TEROSON® BOND ALL-IN-ONE PRIMER is also suitable to ensure the correct adherence of LOCTITE® PU EV 9785 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® PU EV 9780 is applied as usual, but taking into consideration the layer thickness of the pre-coating.

Application

1. The EV Battery housing gasketing adhesive LOCTITE® PU EV 9785 is best applied from cartridges using commercial equipment such as hand, battery driven or air-pressure dispensers with a piston rod.
2. For application, we recommend using dispenser TEROSON® POWERLINE II.
3. Application should be performed ideally in one continuous bead, if possible.

Storage

Store product in the unopened container in a dry location. Storage information may be indicated on the product container labeling.
Optimal storage: 15°C 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

(°C x 1.8) + 32 = °F
kV/mm x 25.4 = V/mil
mm / 25.4 = inches
µm / 25.4 = mil
N x 0.225 = lb
N/mm x 5.71 = lb/in
N/mm² 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

Disclaimer

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