Technical Data Sheet

# LOCTITE® PU EV 9785

LOCTITE® PU EV 9785 June 2026

## 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 |
| Viscosity | Paste |
| **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, meet IPX9K water protection requirements*<br>• Superior bonding strength<br>• 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<br>DIN 50014 @ 23°C/50%RH | ~3 |
| Volume change, %<br>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<br>DIN53505 | ~ 55 |
| Elongation at break, %<br>DIN53504 | ~400 |
| Tensile strength<br>N/mm$^2$<br>DIN53504 | ~8.5 |
| Stress, @100 el%, MPa<br>DIN 53504 | ~2.5 |
| Shear modulus, MPa<br>DIN 53504 | ~1.2 |
| Shear strength<br>After 24 h, MPa<br>DIN 54451 | 2 |
| Layer thickness 5mm, fully cured<br>Based on DIN 54451 | 5 to 6 |

## Typical sealing application performance**

**Ingress Protection Rating based on ISO** 20653:2023 and GB/T 30038:2013, tested at

| | |
|---|---|
| Water pressure and temperature: ~~1000 kPa, (23± 5) °C | IPX6K |
| Water immersion depth and duration: 1 m, 30 minutes | IPX7 |
| Water immersion depth and duration: 1 m, 24 minutes | IPX8 |
| Water pressure and temperature: ~ ~8500 kPa, (80 ± 5) °C | IPX9K |

**LOCTITE® PU EV 9785 is applied as a battery pack housing sealant, meets the requirements of water protection tested sequentially from IPX6K, IPX7, IPX8, to IPX9K according to ISO 20653:2023 and GB/T 30038:2013.

## 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.

**Preparation**

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.

**Pre-treatment**

1. Wipe off surface with a lint free cloth and TEROSON® VR 10.
2. Abrade bond line with a smooth abrasive pad.
3. Wipe off surface again with a lint-free cloth and TEROSON® VR 10 and let dry approximately 5 minutes.

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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. When reusing battery housings which have already been applied with a PU-based adhesive/sealant, the adhesive layer can be cut back with a sharp blade and re-bonded directly with LOCTITE® PU EV 9785.

   NOTE: Provided that it is not contaminated with dust or grease, the old cut-back adhesive bead is the best underground for the LOCTITE® PU EV 9785 adhesive sealant.

4. If more than 2 hours pass between cutting back and applying the adhesive, the old cut-back adhesive bead must be pre-treated with TEROSON® BOND ALL-IN-ONE PRIMER.
5. To do this, apply a thin layer of TEROSON® BOND ALL-IN-ONE PRIMER to the remain bead using a wool dauber or TEROSON BOND SPONGE and allow to evaporate for 10 minutes.
6. Then apply LOCTITE® PU EV 9785 as usual, but taking into consideration the layer thickness of the remain adhesive bead.

**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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Reference 1

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