Technical Data Sheet

LOCTITE® EA E-30HV

July 2023

PRODUCT DESCRIPTION

LOCTITE® EA E-30HV provides the following product characteristics:

Technology	Epoxy
Chemical type	Epoxy
Appearance (resin)	Off white
Appearance (hardener)	Off white
Appearance (mixed)	Off white
Components	Two components – requires mixing
Viscosity	High thixotropic
Mix ratio, (by volume) Resin : Hardener	2 : 1
Mix Ratio, (by weight) Resin : Hardener	100 : 50
Cure	Room temperature cure after mixing
Application	Bonding, Potting

LOCTITE® EA E-30HV is a two-component high viscosity, industrial grade epoxy adhesive. Once mixed, the two-part epoxy system develops fast fixture strength and cures within 24 hrs. with minimal shrinkage. When fully cured, the epoxy withstands exposure to a wide range of chemicals and solvents and has excellent dimensional stability over a wide temperature range. It bonds well to most materials including glass, optical fibers, ceramics, metals, and many rigid plastics. LOCTITE® EA E-30HV has good balance of flow characteristics and thixotropic behavior at low shear that ensures applications in vertical and horizontal surfaces with 1-2 mm gap filling and partially non sagging properties. Typical applications include general purpose bonding, potting, or encapsulating.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Resin

Specific gravity @ 23°C	1.73
Viscosity, Brookfield – CAP 2000+ @25°C, mPa.s (cP): Spindle 5, speed 10 rpm	33,000

Hardener

Specific gravity @ 23°C	1.61
Viscosity, Brookfield – CAP 2000+ @25°C, mPa.s (cP): Spindle 5, speed 10 rpm	75,000

Mixed

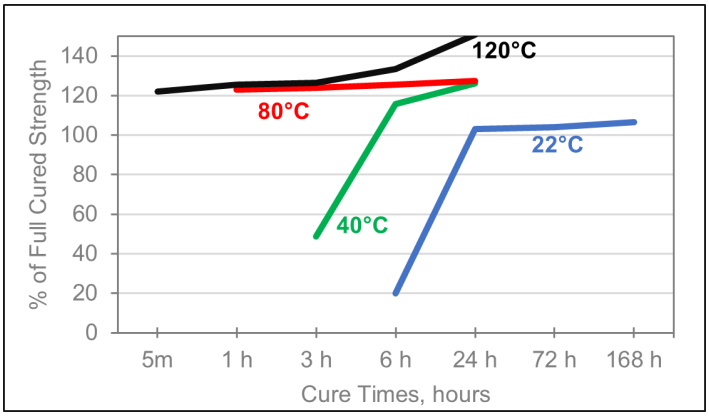
Specific gravity @ 23°C	1.62
Viscosity, Brookfield - RVT, 25 °C, mPa·s (cP): Spindle 5, speed 5 rpm	51,000

TYPICAL CURING PERFORMANCE

Gel time (100 gm mixed) @23°C, minutes	26

Cure speed vs. time

The rate of cure will depend on the ambient temperature. The graph below shows the shear strength developed with time @23°C on grit blasted steel lap shears at different temperatures and tested according to ASTM D 1002.



TYPICAL PERFORMANCE OF CURED MATERIAL

Cured for 5 days @ 23°C

Physical properties

Glass Transition Temperature (Tg), °C TMA, ISO 11359-2		64
Shore Hardness, ASTM D 2240, Durometer D		80
Compressive Strength, ASTM D 695	N/mm^2 (psi)	44 (6,380)
Compressive Modulus, ASTM D 695	N/mm^2 (psi)	980 (142,000)

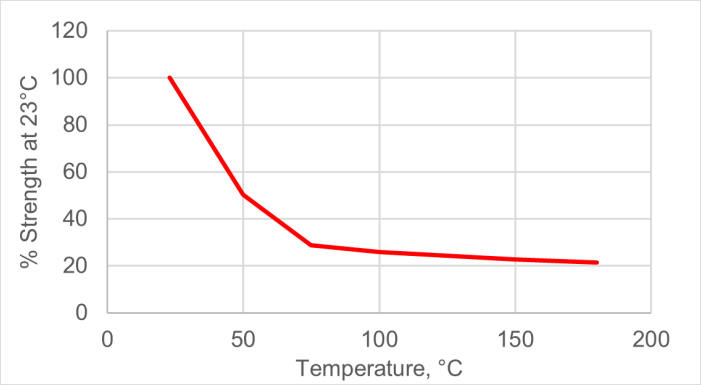
Adhesive properties

Lap Shear Strength, ASTM D 1002

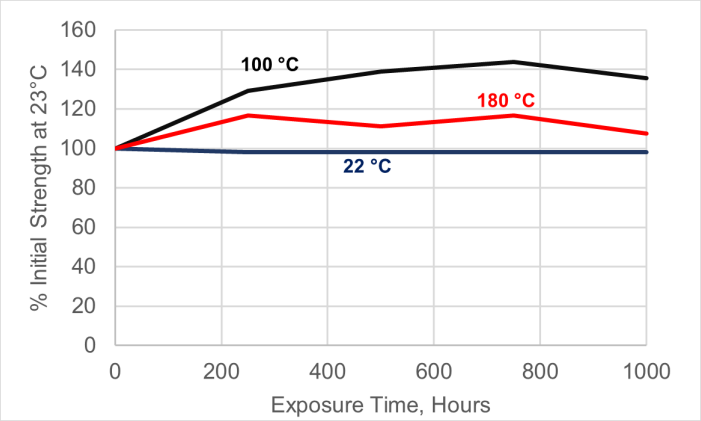
Mild steel (grit blasted)	N/mm^2 (psi)	21 (3,000)
Aluminum (Anodized)	N/mm^2 (psi)	11 (1,600)
Stainless steel	N/mm^2 (psi)	3.5 (500)
Polycarbonate	N/mm^2 (psi)	1.8 (260)

TYPICAL ENVIRONMENTAL RESISTANCE
Cured for 5 days @ 23°C
Lap Shear Strength, ASTM D 1002, Mild Steel (Grit Blasted)

Hot strength
Tested at temperature



Heat aging
Aged at temperature indicated and tested @ 23 °C.



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).

Directions for use

1. For high strength structural bonds, remove surface contaminants such as paint, oxide films, oils, dust, mold release agents and all other surface contaminants.
2. Use gloves to minimize skin contact. DO NOT use solvents for cleaning hands.
3. **Hand Mixing:** Combine Part A & Part B in the correct ratio and mix thoroughly. Be sure to scrape both the sides and bottom of mixing container. Mix for approximately 2 to 5 minutes to get the uniform color. Heat build-up during or after mixing is normal.
4. For maximum bond strength apply adhesive evenly to both surfaces to be joined.
5. Application to the substrates should be made within 26 minutes. Larger quantities and/or higher temperatures will reduce this working time.
6. Join the adhesive coated surfaces and allow to cure. Higher temperatures will speed up curing.
7. Keep assembled parts from moving during cure. The bond should be allowed to develop full strength before subjecting to any service load.
8. Excessive uncured adhesive can be cleaned up with ketone type solvents.

Storage
Store product in the unopened container in a dry location. Storage information may be indicated on the product container labeling.
Optimal Storage: 8°C to 21°C. Storage below 8°C or greater than 28°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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