Preliminary technical data sheet-

LOCTITE® EA E-30 HV
Product 3981

Medical Products, June 2002 Feb 27, 2014

PRODUCT DESCRIPTION:

LOCTITE® EA E-30 HV is a 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. LOCTITE® EA E-30 HV has good balance of flow characteristics and thixotrpic 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

LOCTITE® EA E-30 HV is designed for bonding, potting, staking and laminating applications where excellent structural, mechanical, and electrical insulating properties are required. It bonds well to most materials including glass, optical fibers, ceramics, metals, and many rigid plastics. The high thermal conductivity provides good heat dissipation for thermally sensitive components.
Typical applications include bonding transformers, transistors and other heat generating electronic components to printed circuit board assemblies or heat sinks

LOCTITE® EA E-30 HV Characteristics:

Chemistry	Filled epoxy and amine hardener
Type	Bisphenol A based resin
Appearance	Off white
Pot life	30 min
% Solids	100%
Recommended cure for handling Strength @ 25º	4 hour
Minimum cure time @ 25ºC	16-24 hrs

TYPICAL PROPERTIES OF UNCURED MATERIAL

Part A	**Value**	**Range**
Viscosity, Brookfield- 25 °C, mPa·s (cP):	35000	29000-40000
Weight per Gallon, lbs/gal	14.6	14.5-14.8
Part B		
Viscosity, Brookfield- 25 °C, mPa·s (cP):	23000	19000-26000
Weight per Gallon, lbs/gal	11.8	11.5-12.5
Mixed:		
Viscosity, Brookfield- 25 °C, mPa·s (cP):	40000	34000-41000
Mixed ratio (A:B) By weight	100:29	
By Volume	100: 36	

TYPICAL CURING PERFORMANCE

Curing Properties	**Typical Value**
Working life 70 gm @ 25 ° C	30 min
Fixture Time 1gm @ 25 °C	240min

TYPICAL PROPERTIES OF CURED MATERIAL

(@ 25 °C unless noted)

	Typical Value
Dielectric Strength, KV/mm	19.2
Volume Resistivity, fi-cm	1.84×10^{14}
Mod. Of elasticity, ASTM D 638-2010, N/mm^2	7960
CTE, µmm / mm ºC	38
Hardness ASTM D-1706, Shore D	85
Glass Transition Temperature, Tg, °C	55
Thermal Conductivity, Wm/K	0.6

PERFORMANCE OF CURED MATERIAL

Shear strength vs Substrate

(Leap Shear Cured at 25 °C for 24 hour)

	Typical Value N/mm^2
ABS	3.4 (sub. Fail)
SS	17.4
GBMS	15.9
AL	12.6

GENERAL INFORMATION

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

Directions for use

Mixing:

1. Material temperature should be between 18 °C to 27 °C.
2. Add part A to the container and add part B to it while mixing at appropriate mixing ratio.
3. Mixing time should be 2-5 min.

Application Method:

1. Apply fully mixed material to the surface.
2. Ensure that all mixed materials dispensed before 30 min, preferably before 20 min (typically for 70gm @ 25 °C). Large quantities and/or higher temperature will reduce this working time.
3. For maximum bond strength apply adhesive evenly to both surfaces to be joined.

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4. Cure the material for minimum of 24 hour at 25 °C for high strength.
5. Excess uncured adhesive can be clean up with ketone type solvents.
6. Alternatively, LOCTITE® EA E-30 HV can be applied using supply pump auto dispensing unit using static mix nozzle. Henkel TCS group can provide specific details of the meter mix equipment.

Caution:

Technical Tips for Working with Loctite® Working time and cure depends on temperature and mass:

- The higher the temperature, the faster the cure.
- The larger the mass of material, the faster the cure.

LMS

Loctite Material Specification

LMS dated Oct 15, 2013. Test reports for each batch are available for the indicated properties. LMS test reports include selected QC test parameters considered appropriate to specifications for customer use. Additionally, comprehensive controls are in place to assure product quality and consistency. Special customer specification requirements may be coordinated through Henkel Loctite Quality.

Storage

Store product in the unopened container in a dry location. Material removed from containers may be contaminated during use. Do not return liquid to original container. Storage information may be indicated on the product container labeling. **Optimal Storage: 18 °C to 25 °C. Storage below 10 °C or greater than 30 °C can adversely affect product properties**. Henkel cannot assume responsibility for product which has been contaminated or stored under conditions other than those recommended. If additional information is required, please contact your local Technical Service Center or Customer Service Representative.

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/mm^2 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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Reference 1.1

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