Technical Data Sheet

LOCTITE® PE 8086-AB

July 2024

Product description

LOCTITE® PE 8086-AB provides the following product characteristics:

Technology	Epoxy
Chemical type	2K epoxy
Appearance - Part A	Grey to black
Appearance - Part B	Light yellow
Mix Ratio by weight: Part A : Part B	10:1
Cure	Heat cure
Application	Encapsulation of motor stators, transformer coils, transmission actuators

LOCTITE® PE 8086-AB is solvent free, thermal conductive potting product. This material has high thermal conductivity while achieving low mixed viscosity for easy processing, has excellent electrical insulation and Automatic Transmission Fluid (ATF) oil resistance.

LOCTITE® PE 8086-AB is recommended for encapsulation of components that require heat dissipation and good thermal shock resistance.

Benefits:

- Excellent electrical insulation at room & high temperature.
- Excellent Automatic Transmission Fluid (ATF) oil resistance at 150°C.
- High thermal conductivity, low mixed viscosity for easy process.
- Solvent free, no VOC produced during cured process.
- Excellent thermal shock resistance -40 to 150°C.
- Good adhesion to metal.

Typical properties of uncured material

Part A properties

Specific gravity @ 25°C, g/cm^3	2.84
Viscosity @ 25℃, Pa.s, Rheometer, PP25, 5 1/S	426

Part B properties

Specific gravity @ 25°C, g/cm^3	1.2
Viscosity @ 25°C, Brookfield LVT, 61#, 30rpm, mPa.s	41

Mixed properties

Viscosity @ 60 °C, Pa.s, Rheometer, PP25, 5 1/S	1.88

Typical properties of cured material

Cured @ 90°C 1 hour + 130°C 1 hour

Physical properties

Hardness, shore D	86
Thermal conductivity, W/M.K	1.58
Lap shear strength for 6063Al, MPa, 25°C	13.8
Glass transition temperature, °C	105
Coefficient of thermal expansion, ppm/K	25.2(<Tg), 96.4(>Tg)
Young's modulus, GPa	16.3
Tensile strength, MPa	18.98
Volume resistance @1000V, Ω· cm	1.85E+14
Dielectric strength, KV/mm	22.6
Comparative tracking index, V	>= 600

General information

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

Directions for use

- Complete cleaning of the components and substrates should be performed to remove contamination such as dust, moisture, salts and oils which may decrease adhesion and electrical insulation.
- To ensure a void-free embedment, vacuum deairing should be used to remove any entrapped air during the mixing operation.
- Advice deairing at a controlled vacuum, foam may rise from the material multiple times, deairing can be completed until most of the bubbling has ceased.
- Gentle warming of the assembled components will help to reduce material viscosity and improve the flow the material into the components, but material pot life may be shortened.
- Curing conditions (time and temperature) may vary based on customer's experience and their application requirements, as well as customer curing equipment, oven loading and actual oven temperature.
- More specific operation please contact Technical Service Center.

Storage: 5 to 30°C
Store product in the unopened container in a dry location. Storage information may be indicated on the product container labeling. Part A is highly filled and fillers may slightly settle down after long time storage. Before mixing, part A must be homogeneous and should be stirred appropriately before use. Stirring can also be done at 40 or 60°C. Part B store at cool and dry place. Keep the container tightly sealed after using.

Material removed from containers may be contaminated during use. Do not return product to the original container. Henkel 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.

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

Additional information

Disclaimer
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