**PRODUCT DESCRIPTION**

LOCTITE® EA 9466™ provides the following product characteristics:

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technology</td>
<td>Epoxy</td>
</tr>
<tr>
<td>Chemical Type</td>
<td>Epoxy</td>
</tr>
<tr>
<td>Appearance (Resin)</td>
<td>White opaque paste</td>
</tr>
<tr>
<td>Appearance (Hardener)</td>
<td>White translucent liquid</td>
</tr>
<tr>
<td>Appearance (Mixture)</td>
<td>Off-white opaque paste</td>
</tr>
<tr>
<td>Components</td>
<td>Two components - requires mixing</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Medium</td>
</tr>
<tr>
<td>Mix Ratio, (by volume)</td>
<td>2 : 1</td>
</tr>
<tr>
<td>Resin : Hardener</td>
<td></td>
</tr>
<tr>
<td>Mix Ratio, (by weight)</td>
<td>100 : 50</td>
</tr>
<tr>
<td>Resin : Hardener</td>
<td></td>
</tr>
<tr>
<td>Cure</td>
<td>Room temperature cure after mixing</td>
</tr>
<tr>
<td>Application</td>
<td>Bonding</td>
</tr>
</tbody>
</table>

LOCTITE® EA 9466™ is a toughened, industrial grade epoxy adhesive with extended work life. Once mixed, the two component epoxy cures at room temperature to form a tough, off-white bondline which provides high peel resistance and high shear strengths. The fully cured epoxy is resistant to a wide range of chemicals and solvents, and acts as an excellent electrical insulator. LOCTITE® EA 9466™ provides excellent bond strengths to a wide variety of plastics and metals. Typical applications include general purpose industrial applications requiring extended work life for adjusting parts during assembly.

**TYPICAL PROPERTIES OF UNCURED MATERIAL**

**Resin:**
- Specific Gravity @ 25 °C: 1.0
- Flash Point - See SDS
- Viscosity, Brookfield - RVT,25°C,mPa·s (cP):
  - Spindle 6, speed 20 rpm: 15,000 to 50,000

**Hardener:**
- Specific Gravity @ 25 °C: 1.0
- Flash Point - See SDS
- Viscosity, Brookfield - RVT,25°C,mPa·s (cP):
  - Spindle 5, speed 50 rpm: 25,000 to 60,000

**Mixed:**
- Working life, minutes: 60

**TYPICAL CURING PERFORMANCE**

**Fixture Time**
- Fixture time is defined as the time to develop a shear strength of 0.1 N/mm².
- Fixture Time, ISO 4587, minutes:
  - Steel (grit blasted): 180

**Cure Speed vs. Time, Temperature**
- The rate of cure will depend on the ambient temperature, elevated temperatures may be used to accelerate the cure. The graph below shows shear strength developed with time at various temperatures on grit blasted steel lap shears and tested according to ISO 4587.
TYPICAL PROPERTIES OF CURED MATERIAL
Cured for 7 days @ 22 °C, 1.2 mm thick film

**Physical Properties:**
- Glass Transition Temperature, ASTM E 1640, °C: 62
- Shore Hardness, ISO 868, Durometer D: 60
- Elongation, ISO 527-3, %: 3
- Tensile Strength, ASTM D 882: N/mm² (psi) 32 (4,640)
- Tensile Modulus, ISO 527-3: N/mm² (psi) 1,718 (249,110)

**Electrical Properties:**
- Dielectric Breakdown Strength, IEC 60243-1: kV/mm 30

TYPICAL PERFORMANCE OF CURED MATERIAL
Adhesive Properties
Cured for 5 days @ 22 °C

- Lap Shear Strength, ISO 4587:
  - Steel (grit blasted): N/mm² (psi) 37.0 (5,365)
  - Aluminum (abraded): N/mm² (psi) 26.0 (3,770)
  - Aluminum (anodised): N/mm² (psi) 17.9 (2,595)
  - Galvanized Steel (Hot Dipped): N/mm² (psi) 8.5 (1,230)
  - Stainless steel: N/mm² (psi) 23.0 (3,335)
  - Polycarbonate: N/mm² (psi) 5.3 (765)
  - Nylon: N/mm² (psi) 1.6 (230)
  - Wood (Fir): N/mm² (psi) 11.3 (1,635)
  - GRP: N/mm² (psi) 5.0 (725)
  - ABS: N/mm² (psi) 4.7 (680)

- 180° Peel Strength, ISO 8510-2:
  - Steel (grit blasted): N/mm (lb/in) 8.0 (115.5)

- Tensile Strength, ISO 6922:
  - Steel pin (grit blasted) to Soda glass: N/mm² (psi) 43.2 (6,260)

- Impact Strength, ISO 9653, J/m²:
  - Steel (grit blasted): 5.8

TYPICAL ENVIRONMENTAL RESISTANCE
Cured for 5 days @ 22 °C

**Hot Strength**
Tested at temperature

**Heat Aging**
Aged at temperature indicated and tested @ 22 °C

**Chemical/Solvent Resistance**
Aged under conditions indicated and tested @ 22 °C.

<table>
<thead>
<tr>
<th>Environment</th>
<th>°C</th>
<th>500 h</th>
<th>1000 h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motor oil (10W30)</td>
<td>87</td>
<td>135</td>
<td>145</td>
</tr>
<tr>
<td>Unleaded gasoline</td>
<td>22</td>
<td>95</td>
<td>125</td>
</tr>
<tr>
<td>Water/glycol 50/50</td>
<td>87</td>
<td>75</td>
<td>75</td>
</tr>
<tr>
<td>Salt fog</td>
<td>22</td>
<td>---</td>
<td>80</td>
</tr>
<tr>
<td>98% RH</td>
<td>40</td>
<td>85</td>
<td>90</td>
</tr>
<tr>
<td>Condensing Humidity</td>
<td>49</td>
<td>---</td>
<td>90</td>
</tr>
<tr>
<td>Water</td>
<td>22</td>
<td>---</td>
<td>90</td>
</tr>
<tr>
<td>Acetone</td>
<td>22</td>
<td>75</td>
<td>90</td>
</tr>
<tr>
<td>Isopropanol</td>
<td>22</td>
<td>90</td>
<td>100</td>
</tr>
</tbody>
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</table>

Tensile Strength, ISO 6992:
Steel pin (grit blasted) to Soda glass
GENERAL INFORMATION
For safe handling information on this product, consult the Safety Data Sheet (SDS).

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.

Where aqueous washing systems are used to clean the surfaces before bonding, it is important to check for compatibility of the washing solution with the adhesive. In some cases these aqueous washes can affect the cure and performance of the adhesive.

Directions for use:
1. For best performance part surfaces should be clean and free of grease.
2. For high strength structural bonds, remove surface contaminants such as paint, oxide films, oils, dust, mold release agents and all other surface contaminants.
3. Dual Cartridges: To use simply insert the cartridge into the application gun and start the plunger into the cylinders using light pressure on the trigger. Next, remove the cartridge cap and expel a small amount of adhesive to be sure both sides are flowing evenly and freely. If automatic mixing of resin and hardener is desired, attach the mixing nozzle to the end of the cartridge and begin dispensing the adhesive. For hand mixing, expel the desired amount of the adhesive and mix thoroughly. Mix for approximately 15 seconds after uniform color is obtained.
   Bulk Containers: Mix thoroughly by weight or volume in the proportions specified in Product Description section. Mix vigorously, approximately 15 seconds after uniform color is obtained.
4. Do not mix quantities greater than 4 kg as excessive heat build-up can occur. Mixing smaller quantities will minimize the heat build-up.
5. Apply the adhesive as quickly as possible after mixing to one surface to be joined. For maximum bond strength apply adhesive evenly to both surfaces. Parts should be assembled immediately after mixed adhesive has been applied.
6. Keep assembled parts from moving during cure. The bond should be allowed to cure 24 hours before subjecting to any service loads.
7. Excess uncured adhesive can be wiped away with organic solvent (e.g. Acetone).
8. After use and before adhesive hardens mixing and dispensing equipment should be cleaned with hot soapy water.

Not for product specifications
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.

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 Technical Service Center or Customer Service Representative.

Conversions
\[(°C \times 1.8) + 32 = °F\]
\[\text{kV/mm} \times 25.4 = \text{V/mil}\]
\[\text{mm} / 25.4 = \text{inches}\]
\[\mu\text{m} / 25.4 = \text{mil}\]
\[N \times 0.225 = \text{lb}\]
\[N / \text{mm} \times 5.71 = \text{lb/in}\]
\[N / \text{mm}^2 \times 145 = \text{psi}\]
\[\text{MPa} \times 145 = \text{psi}\]
\[N \times 8.851 = \text{lb/in}\]
\[N / \text{mm} \times 0.738 = \text{lb/ft}\]
\[N / \text{mm} \times 0.142 = \text{oz/in}\]
\[\text{mPa} \cdot \text{s} = \text{cP}\]

Note:
The information provided in this Technical Data Sheet (TDS) including the recommendations for use and application of the product are based on our knowledge and experience of the product as at the date of this TDS. The product can have a variety of different applications as well as differing application and working conditions in your environment that are beyond our control. Henkel is, therefore, not liable for the suitability of our product for the production processes and conditions in respect of which you use them, as well as the intended applications and results. We strongly recommend that you carry out your own prior trials to confirm such suitability of our product.

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Reference 1.4