ZeoGlue-HV
Active Edge Sealant

HIGHLIGHTS

Product Description
ZeoGlue-HV is a UV curable dispersion of SAES Getters proprietary engineered nano-zeolites in an epoxy matrix. It is designed to work as an active edge sealant. ZeoGlue-HV looks like a whitish paste.

ZeoGlue-HV Properties

<table>
<thead>
<tr>
<th>Material Property</th>
<th>Typical value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Whitish glue</td>
</tr>
<tr>
<td>Viscosity at 25 °C (cP) (*)</td>
<td>110,000</td>
</tr>
<tr>
<td>Density (g/cm³)</td>
<td>1.20</td>
</tr>
<tr>
<td>Thermal stability at 100 °C</td>
<td>Stable (=&lt;1%wt loss)</td>
</tr>
<tr>
<td>Decomposition temperature (°C)</td>
<td>&gt; 300</td>
</tr>
<tr>
<td>Tg (glass transition temperature) (°C)</td>
<td>110</td>
</tr>
<tr>
<td>Storage temperature (°C)</td>
<td>+2/ + 5</td>
</tr>
<tr>
<td>Shelf life (months)</td>
<td>6</td>
</tr>
<tr>
<td>Pot life (RT, &lt; 10 ppm H₂O₂) (days)</td>
<td>&gt;5</td>
</tr>
<tr>
<td>Storage atmosphere</td>
<td>Dry air or nitrogen</td>
</tr>
<tr>
<td>Lap Shear(**) (MPa)</td>
<td>&gt;8.0</td>
</tr>
<tr>
<td>CTE @ 100 °C (1/ °C)</td>
<td>5.4*10⁻³</td>
</tr>
</tbody>
</table>

(*) at a shear rate of 5 s⁻¹
(**) in glass to glass configuration, with properly cured glue, after 85 °C/85%RH/1000h ageing process. Glass specimen broke at the indicated value.

Processing
Bring ZeoGlue-HV to room temperature before use. Deposition must be carried out in dry environment.

Deposition
Typical dispensing by syringe (needle diameter > 0.1 mm)

Compatible surfaces are:
- Glass
- Stainless Steel and other metals (one-side only e.g. metal to glass)
- Plastics if compatible with UV curing

Curing
- UV Curing is required
- Suggested curing conditions are:
  - irradiance of 100mW/cm² for > 120s with λ = 365 nm
  - thermal post curing at 80 °C for 30 minutes
  - max irradiance: < 500mW/cm²
  - max energy density: < 12J/cm²
Curing must take place in glove box (<10 ppm H₂O)

Weight loss during curing: <0.2%

### Barrier Properties

<table>
<thead>
<tr>
<th>Barrier property</th>
<th>ZeoGlue-HV Typical value</th>
</tr>
</thead>
<tbody>
<tr>
<td>WVTR at 23 °C 65% RH (300 μm, g/m² day after saturation(*)</td>
<td>&lt;0.1</td>
</tr>
<tr>
<td>Breakthrough time on 4 mm line width at 60 °C 90% RH (**)(hour)</td>
<td>&gt;1,500</td>
</tr>
</tbody>
</table>

(*) In glass to glass configuration, on properly cured film. During breakthrough time the WVTR is theoretically zero and lower than the limit of detection.

(**) This can be considered equivalent to 2.5 years at 25 °C 30% RH. After this transient period the glue keeps working as state-of-art passive barrier, as shown with the reported WVTR after saturation.

### Barrier Properties: the Concept of Breakthrough Time

**Cleaning**

Typical solvent used for cleaning is Acetone or Acetic acid diluted at 5% in water.

**Shipping and Storage**

Shelf life of ZeoGlue-HV is 6 months.

Storage conditions are temperature of +2 to +5 °C and dry atmosphere.

ZeoGlue-HV can be stored in a normal refrigerator provided that the original packaging is not open, or it is sealed in dry atmosphere.

In the event of exposure at temperature higher than 50°C, ZeoGlue must be discarded.

**Handling and Air Exposure**

Barrier bag should be opened in glove box (<10 ppm H₂O).

Opening in air must be avoided.

In the event of air exposure, ZeoGlue-HV must be discarded.

Before use, it must be left at room temperature for at least 2 hours; otherwise viscosity could be higher than the nominal value.

Uncured ZeoGlue-HV can be maintained at room temperature for maximum 120 hours before using.

**Ordering Information**

- Code: 5X0400 Description: ZEOGLUE-HV/SMU10 (Musashi syringe - 10cc)
- Code: 5X0401 Description: ZEOGLUE-HV/SMU50 (Musashi syringe - 50cc)
- Code: 5X0402 Description: ZEOGLUE-HV/SMU10 (with spacers)
- Code: 5X0403 Description: ZEOGLUE-HV/SEU10 (EFD syringe - 10cc)
- Code: 5X0404 Description: ZEOGLUE-HV/SEU50 (EFD syringe - 50cc)
- Code: 5X0405 Description: ZEOGLUE-HV-0/SEU10

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