PRODUCT DESCRIPTION

LOCTITE® NS 5540 provides the following product characteristics:

<table>
<thead>
<tr>
<th>Technology</th>
<th>Sealant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical Type</td>
<td>Thermally Reactive</td>
</tr>
<tr>
<td>Appearance</td>
<td>Brown Liquid</td>
</tr>
<tr>
<td>Cure</td>
<td>Heat Cure</td>
</tr>
<tr>
<td>Application</td>
<td>Sealant for Threads and Flanges</td>
</tr>
</tbody>
</table>

Application Temperature 15 to 30°C (59 to 86°F)
Service Temperature 38 to 700°C (100 to 1,300°F)
Strength High

Specific Benefits
- One component
- Low Viscosity
- Chemical Resistant

LOCTITE® NS 5540 is a thermal reactive liquid sealing compound that is used in high temperature and high pressure applications. In the presence of heat, LOCTITE® NS 5540 will form a ‘mechanical type’ seal. LOCTITE® NS 5540 will not cement the flanges together, thus, it will not interfere with future repairs of metal-to-metal joints. LOCTITE® NS 5540 is unaffected by thermal cycling. This product has been successfully used to seal flanges carrying up to 2900 psi steam.

TYPICAL PROPERTIES OF UNCURED MATERIAL

- Density @ 25°C Lb/gal 8.08
- Viscosity Brookfield- DV-E mPa.s 48,450
- K-Factor at 55 Ksi (cP) 0.14
- Flash Point See SDS

TYPICAL CURING PROFILE

<table>
<thead>
<tr>
<th>Temperature</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>@ 200 °F (93°C)</td>
<td>36</td>
</tr>
<tr>
<td>@ 300 °F (149°C)</td>
<td>12</td>
</tr>
<tr>
<td>@ 400 °F (204°C)</td>
<td>8</td>
</tr>
<tr>
<td>@ 500 °F (260°C)</td>
<td>3</td>
</tr>
<tr>
<td>@ 600 °F (316°C)</td>
<td>2</td>
</tr>
<tr>
<td>@ 700 °F (370°C)</td>
<td>1</td>
</tr>
</tbody>
</table>

TYPICAL PERFORMANCE OF CURED MATERIAL

- Breakloose Torque, ISO 10964 Ft*Lb 160
  1.25 inch dia, 7 pitch, B-7 Bolt w/ 2H Nut Ambient (215 make-up torque)
- Breakloose Torque, ISO 10964 Ft*Lb 100
  1.25 inch dia, 7 pitch, B-7 Bolt w/ 2H Nut 1,300 °F (215 make-up torque)
- Threaded Connector Test, seal confirmation Pass 1300°F/100 psi / 1 hour

TYPICAL ENVIRONMENTAL RESISTANCE

<table>
<thead>
<tr>
<th>Tables below show chemical resistance:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Alkalis</strong></td>
</tr>
<tr>
<td>Temperature</td>
</tr>
<tr>
<td>Sodium Hydroxide</td>
</tr>
<tr>
<td><strong>Solvents</strong></td>
</tr>
<tr>
<td>Temperature</td>
</tr>
<tr>
<td>Water/Steam</td>
</tr>
<tr>
<td>Isopropanol</td>
</tr>
<tr>
<td><strong>Hydrocarbons</strong></td>
</tr>
<tr>
<td>Temperature</td>
</tr>
<tr>
<td>ISOPAR M</td>
</tr>
<tr>
<td>Transmission Fluid</td>
</tr>
</tbody>
</table>

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

Surface Preparation
Remove dirt, oil, grease etc. with a suitable cleaner, e.g. Loctite® SF 7840™ (Loctite® Natural Blue® cleaner/degreaser).

Application
1. Surface should be clean and dry (free from oil or foreign material to ensure proper sealing/adhesion) 2. Apply a thin coat to sealing surface with brush (if sealing threads, apply only to the male threads)
3. Close and tighten joint (torqued to the equipment manufacturer’s specifications if sealing a bolted flange)
4. Product will cure in service with heat (See Note)

Note: In high pressure applications or when pressure testing at ambient, it is recommended to pre-cure with a heat gun, oven, or to dry fire / blow down at atmospheric (running heat without pressure). Unlike silicone or epoxy products, our thermosetting sealants require heat to cure.

Clean-up
Immediately after use, clean tools with suitable cleaner, e.g. Loctite® SF 7707™ or a solvent such as acetone or Isopropyl alcohol. Once cured, the material can only be removed mechanically.

Storage
The product is classified as flammable and must be stored in an appropriate manner in compliance with relevant regulations. Do not store near oxidizing agents or combustible materials. Store product in the unopened container in a dry location. Storage information may also be indicated on the product container labelling.
Optimal Storage: 8 to 21 °C (50 to 70 °F). 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 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.

Shelf Life of Unopened Container:
24 months

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

Note

The information provided in this Laboratory Data Sheet (LDS) 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 LDS. As this is an experimental product, the data is for reference only and should not be taken as specifications.

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 N/A