**Features & Benefits**

- Vibration resistant
- Very high strength
- Excellent chemical resistance
- Lubricates threads for easier assembly
- High temperature resistance

**Description**

Permabond® HH131 is a very high temperature resistant, high strength anaerobic threadlocker and sealant. This material cures in the absence of air between tight fitting metal parts. It is used for locking bolts, nuts and screws that require permanent assembly. This material is best suited for applications requiring high temperature resistance.

**Physical Properties of Uncured Adhesive**

<table>
<thead>
<tr>
<th>Chemical composition</th>
<th>Acrylic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Red</td>
</tr>
<tr>
<td>Viscosity @ 25°C</td>
<td>2rpm: 23,000 mPa.s (cP) 20rpm: 7,500 mPa.s (cP)</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.1</td>
</tr>
<tr>
<td>UV fluorescence</td>
<td>No</td>
</tr>
</tbody>
</table>

**Typical Curing Properties**

| Maximum gap fill | 0.3 mm 0.012 in |
| Time taken to reach handling strength (M10 steel) @23°C | 15 minutes* |
| Time taken to reach working strength (M10 steel) @23°C | 3-6 hours |
| Full strength (M10 steel) @23°C | 24 hours |

*Handling time at 23°C / 73°F. Copper and its alloys will make the adhesive cure more quickly, while oxidised or passivated surfaces (like stainless steel) will reduce cure speed. To reduce curing time, use Permabond activator A905 or ASC10 alternatively, increasing the curing temperature will reduce curing time.

**Typical Performance of Cured Adhesive**

| Torque strength (M10 steel ISO10964) | Break 27 N-m 240 in.lb |
| Shear strength (steel collar & pin ISO10123) | Preval 54 N-m 480 in.lb |
| Coefficient of thermal expansion | 90 x 10^-6 mm/mm/°C |
| Dielectric strength | 11 kV/mm |
| Thermal conductivity | 0.19 W/(m.K) |

*Cure times are typical at 23°C. Copper and its alloys will follow the faster cure while oxidised or passivated surfaces like stainless steel will tend towards the slower curve. Lower temperatures or large gaps will tend to extend the cure time. To reduce the cure time the use of Permabond A905, ASC10, or heat can be considered.
Surface Preparation

Though the anaerobic adhesives will tolerate a slight degree of surface contamination, best results are obtained on clean, dry and grease free surfaces. The use of a suitable solvent-based cleaner (such as acetone or isopropanol) is recommended. In general, roughened surfaces (~25μm) give higher bond strengths than polished or ground surfaces. To reduce the curing time, especially on inactive surfaces (such as zinc, aluminium and stainless steel), the use of Permabond A905 or ASC10 can be considered.

Directions for Use

1) Shake bottle before use.
2) Prevent the tip from touching metal surfaces during application.
3) When working with through holes, dispense a bead of material across the contact length of the threads.
4) When working with blind holes, apply several drops down the threads to the bottom of the hole.
5) Assemble and torque the parts as necessary.
6) Replace lid to bottle to avoid contamination of remaining liquid adhesive.

Video Link

Retaining compound directions for use: https://youtu.be/MUODESzfrZ8

Storage & Handling

Storage Temperature

5 to 25°C (41 to 77°F)

Users are reminded that all materials, whether innocuous or not, should be handled in accordance with the principles of good industrial hygiene. Full information can be obtained from the Safety Data Sheet.

This Technical Datasheet (TDS) offers guideline information and does not constitute a specification.

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