**Perma-Lok A1044** is a rapid curing sealant designed to lock and seal metal pipe connections, offering very good resistance to even the most aggressive chemicals. Perma-Lok A1044 can be used to seal against most gases and liquids and can provide an instant pressure seal, minimising down time and speeding up production processes. Unlike PTFE tape or hemp, Permalok A1044 will not shred or dry out, so it will provide a durable seal, helping to extend the life of the components.

**Summary:**
- High Viscosity
- High Strength
- Pipe Sealant

**A1044 is ideal for pipe-sealing applications**

- Single part room temperature curing
- Easy to use
- Solvent free
- Chemically resistant
- Water Byelaws Scheme approved

**PHYSICAL PROPERTIES**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colour</td>
<td>White</td>
</tr>
<tr>
<td>Viscosity @25°C</td>
<td>75,000 mPa.s Thixotropic</td>
</tr>
<tr>
<td>Maximum Gap Fill</td>
<td>0.5 mm</td>
</tr>
<tr>
<td>Density</td>
<td>1.09</td>
</tr>
</tbody>
</table>

**TYPICAL PROPERTIES**

- Handling Time: 10-25 minutes
- Working Strength: 1 hour
- Full Strength: 24 hours
- Shear Strength: 17 MPa
- Torque Strength (M8 nuts & Bolts): 18 Nm
- Temperature Range: -55 to +150°C

Cure times are typical for steel at 23°C (73°F). Copper and its alloys will be faster while oxidised or passivated surfaces like stainless steel will be slower. Temperature will also affect the cure - for every 8°C (15°F) rise in temperature you halve the times given; for every 8°C (15°F) drop in temperature, the stated cure time doubles.
TEMPERATURE RESISTANCE

Thermal resistance is excellent between -55 and 150°C. Heating causes the adhesive to soften but strength is regained on cooling provided 150°C is not exceeded for prolonged periods. A1044 is resistant to a variety of chemicals such as water, oils, fuels and refrigerants, although very aggressive environments such as strong acids, alkalis and very polar solvents should be avoided. A1044 should not be used in pure oxygen systems.

Storage and Handling

When stored in the original unopened containers at 5-25°C, the shelf life of this product is two years from the date of despatch from Permabond. Please also read the Material Safety Data Sheet. Users are reminded that all materials, whether innocuous or not, should be handled according to the principles of good industrial hygiene.

Directions for use:

- Surfaces should be clean, dry and grease free prior to bonding. Abrading and degreasing the surface will give a much stronger bond. (MEK or similar solvent can be used to degrease surfaces.)
- If bonding unreactive metals such as aluminium, titanium or zinc, we would recommend using Permabond A905 surface conditioner.
- Apply adhesive to the leading edge of both male and female components and assemble parts.
- Allow the adhesive to cure before exposing to chemicals / pressure etc. (See cure speed section.)

Other Products in the Permabond Range...

Cyanoacrylate adhesives...
General purpose
Low bloom / Low odour
High temperature resistance
Metal bonding
Flexible
Toughened

Anaerobic adhesives...
Threadlocking
Pipe-sealing
Retaining
High temperature resistance
Toughened
Variety of viscosities and strengths available

We also have a new polyolefin primer for pre-treating polypropylene, polyethylene, PTFE. For use with cyanoacrylate adhesive.

If you require help with an application, please contact the Permabond team for technical advice on surface preparation, joint design, adhesive selection and how to optimise your production process.

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