

# Permabond®

## F201HV - Hydrogen Gas Approved

ISO 9001 Certified

"Our Science ... Your Success"

Permabond® F201HV anaerobic sealant is a high-strength, high-performance engineering adhesive designed for sealing metal pipe joints. This special product contains a high-tech rubber core-shell matrix, which absorbs vibration and impact stress without the adhesive cracking. It is ideal for mismatched metal joints where differential expansion and contraction could be an issue

or where there could be thermal shock.

This toughened product is ideal for use in the plumbing, valve and gas distribution industry. It is approved for contact with gas and hot water, as well as recently receiving certification for use in hydrogen gas systems. The KIWA approval allows appliance manufacturers to use this anaerobic sealant safely, in the knowledge that it is suitable for use with hydrogen pipework and is fully resistant to the tiny molecular structure of H<sub>2</sub>, which is an extremely "searching" gas.

**Hydrogen gas is an extremely explosive, high energy, searching gas. It is vital that pipework connections are sealed with approved materials such as F201HV**

### Permabond® F201HV Features, Benefits & Typical Applications

- KIWA approved for contact with gas & hot water, as well as special hydrogen certificate - Inorm KE214
- WRAS approved for water
- High strength: ideal for domestic gas meters, prevents tampering
- Ideal for hydrogen gas valves, joints and fittings as high strength joints can't be accidentally loosened or undone
- No soldering, brazing or welding required = safer use
- Rapid, full cure at room temperature
- Single part, no need to weigh or mix material
- Thixotropic – allows easy dispensing but doesn't drip off components
- Excellent chemical resistance
- Can be used for regulator & valve sealing
- Industrial burners
- Boiler applications

Ideal for bonding:

Alloy

Aluminium

Anodised surfaces

Brass

Chrome

Copper

Mild steel

Stainless steel

Tin

Zinc

+ many more materials



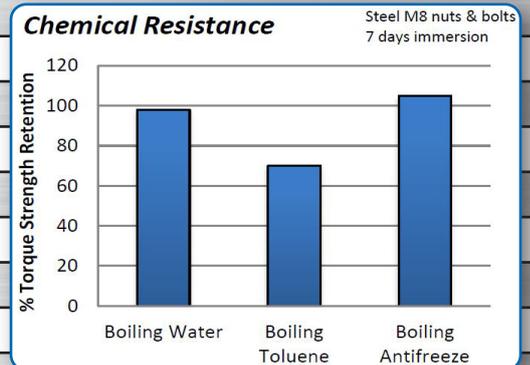
**Permabond®**  
Engineering Adhesives

# Permabond F201HV Product Data

The following technical data for Permabond F201HV is a guideline and does not constitute a specification. For full technical information, please refer to the technical data sheet, available at [www.permabond.com](http://www.permabond.com).

Our experienced worldwide trained distributor network means no matter where in the world you are located, Permabond representatives can be called upon to assist you with your bespoke applications.

F201HV	
Description	Anaerobic adhesive with excellent resistance to peel and impact forces. Single component, room temperature curing.
Appearance	Brown
Features etc	<ul style="list-style-type: none"> <li>• Capable of resisting thermal stresses from bonding dissimilar surfaces</li> <li>• Curing times can be reduced by either increasing temperature or using Permabond A905 / ASC10 Activators</li> <li>• Ideal for threaded or concentric metallic joints</li> <li>• Good adhesion to aluminium and copper alloys</li> <li>• Improved fatigue life</li> <li>• WRAS listed for wholesome (potable) water</li> </ul>
Viscosity @ 25°C	2 rpm: 35,000 mPa.s / 20 rpm: 5,000 mPa.s
Max gap fill	0.3 mm
Max thread size	M50
Thermal conductivity	0.19 W/(m.K)
Coefficient of thermal expansion	90 x 10 <sup>-6</sup> mm/ mm/°C
Handling strength @ 23°C (M10 Steel)	15 minutes
Working strength @ 23°C (M10 Steel)	1 hour
Full strength @ 23°C (M10 Steel)	24 hours
Torque strength (M10 Steel)	Break: 28 Nm / Preval: 30 Nm
Shear strength (steel collar & pin)	30 MPa



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\*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 cure time, use Permabond activator A905 or ASC10. Alternatively, increasing the cure temperature will reduce curing time.



Authorised distributor stamp:



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The information given and the recommendations made herein are based on our experience and are believed to be accurate. No guarantee as to, or responsibility for, their accuracy can be given or accepted, however, and no statement herein is to be treated as a representation or warranty. In every case we urge and recommend that purchasers, before using any product, make their own tests to determine, to their own satisfaction, its suitability for their particular purposes under their own operating conditions. Always refer to current product technical datasheet for most recent and accurate technical information.