

Provisional Technical Datasheet

### Features & Benefits

- Excellent adhesion to stainless steel
- Cures at room temperature
- EU Food Contact 10/2011 compliant
- High shear strength
- Excellent temperature resistance

### Description

**PERMABOND ET5161** is a lightly thixotropic, 2part epoxy adhesive designed to be compliant to EU food contact regulations 10/2011. ET5161 is designed primarily for bonding of stainless steel in food contact applications, however this will bond a variety of other substrates including steel, aluminium and composites.

# **Physical Properties of Uncured Adhesive**

	ET5161A	ЕТ5161В
Chemical composition	Epoxy Resin	Modified Polyamide
Appearance	White	Amber
Viscosity @ 25°C	65,000 mPa.s	300,000 mPa.s
Specific Gravity	1.25	1.05

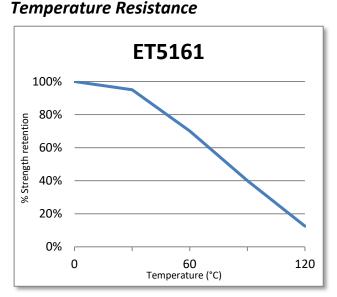
# Typical Curing Properties

Mix ratio by volume	1:1	
Maximum gap fill	2 mm 0.08 <i>in</i>	
Gel time @23°C	70 mins	
Working strength @23°C Working strength @60°C	12 hour 30 mins	
Full cure @23°C Full cure @60°C	24 hours 1 hour	

# Typical Performance of Cured Adhesive

Shear strength (stainless steel)* 20 N/mm <sup>2</sup> (2900 psi)	Shear strength (stainless steel)*	20 N/mm² <b>(2900 psi)</b>
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\*Strength results will vary depending on the level of surface preparation and gap.



ET5161 can withstand higher temperatures for brief periods (such as for paint baking and wave soldering processes) providing the joint is not unduly stressed. The minimum temperature the cured adhesive can be exposed to is -55°C (-67°F) depending on the materials being bonded.

# Additional Information

This product is not recommended for use in contact with strong oxidizing materials. Information regarding the safe handling of this material may be obtained from the material safety data sheet (MSDS). Users are reminded that all materials, whether innocuous or not, should be handled in accordance with the principles of good industrial hygiene.

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Permabond ET5161

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### Surface Preparation

Surfaces should be clean, dry and grease-free before applying the adhesive. Permabond Cleaner A is recommended for the degreasing of surfaces. Some metals such as aluminium, copper and its alloys will benefit from light abrasion with emery cloth (or similar), to remove the oxide layer.

### **Directions for Use**

- 1. For bulk applications ensure the resin and hardener are thoroughly mixed and in the correct proportion.
- 2. Apply material to one of the substrates and avoid entrapping air.
- 3. Assemble the parts applying sufficient pressure to ensure the adhesive spreads to cover the entire bond area.
- 4. Use a jig / clamp to prevent parts moving during cure.
- 5. It is advisable not to disturb the joint until the adhesive is fully cured.
- NB. Exercise caution when mixing large quantities due to exothermic reaction.

# Video Links

Surface preparation: <u>https://youtu.be/8CMOMP7hXjU</u>



*Two-part epoxy directions for use:* <u>https://youtu.be/GRX1RyknYqc</u>

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#### Other Products Available Anaerobics

- Toughened
- Gas & water approved
- High temperature resistanceFlexible

#### **Cyanoacrylates**

- Low bloom / low odour
- Flexible
- High temperature resistance

#### **Epoxies**

- Fast cure
- Toughened
- Flexible grades

#### **Toughened Acrylics**

- Rapid cure
- Low odour
- Pre-mixed
- Gap filling

#### **UV Light Cured**

- Glass / plastic bonding
- Optically clear
- Non-yellowing



# Storage & Handling

Storage Temperature	5 to 25°C <b>(41 to 77°F)</b>	
Shelf Life (Stored in original unopened containers)	12 months	

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