PERMABOND ET5161

Two-Part Epoxy

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	ET5161B
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

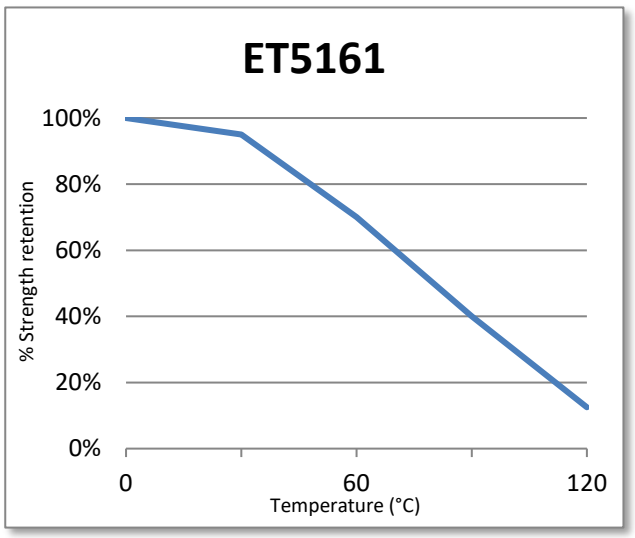
Mix ratio by volume	1:1
Maximum gap fill	2 mm 0.08 *in*
Gel time @23°C	70 mins
Working strength @23°C Working strength @60°C	12 hour 30 mins
Full cure @23°C Full cure @60°C	24 hours 1 hour

Typical Performance of Cured Adhesive

Shear strength (stainless steel)*	20 N/mm² *(2900 psi)*

**Strength results will vary depending on the level of surface preparation and gap.*

Temperature Resistance



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.

The information given and the recommendations made herein are based on our research and are believed to be accurate, but no guarantee of their accuracy is made. In every case we urge and recommend that purchasers before using any product in full-scale production make their own tests to determine to their own satisfaction whether the product is of acceptable quality and is suitable for their particular purpose under their own operating conditions. THE PRODUCTS DISCLOSED HEREIN ARE SOLD WITHOUT ANY WARRANTY AS TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED.
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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:
https://youtu.be/8CMOMP7hXjU

Two-part epoxy directions for use:
https://youtu.be/GRX1RyknYqc

Storage & Handling

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

Other Products Available

Anaerobics

- Toughened
- Gas & water approved
- High temperature resistance
- Flexible

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

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