PERMABOND® ET5429

Two-Part Epoxy

Provisional Technical Datasheet

Features & Benefits

- Ideal for bonding composite materials
- Easy to apply
- High shear and peel strength
- Good impact strength
- High temperature resistance

Description

PERMABOND® ET5429 is a thixotropic two part adhesive with excellent resistance to impact and vibration. The controlled flow properties as well as its ease of mixing and application, enables the adhesive to be used where gap filling or vertical application is required. Permabond® ET5429 has been found to provide exceptional performance even at elevated temperatures. It is ideal for use in construction of composite assemblies.

Physical Properties of Uncured Adhesive

	ET5429A	**ET5429B**
Chemical composition	Epoxy Resin	Polyamide Hardener
Appearance	White	Black
Mixed Appearance	Charcoal black	
Viscosity @ 25°C	200,000-300,000 mPa.s *(cP)*	20,000-30,000 mPa.s *(cP)*
Specific Gravity	1.1	1.0

Typical Curing Properties

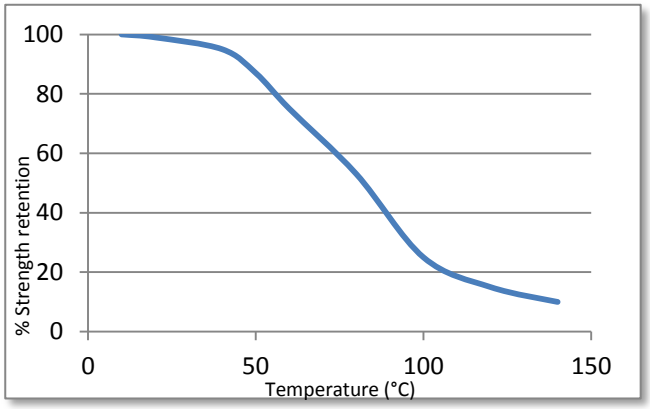
Mix ratio	2:1 by volume 100:45 by weight
Maximum gap fill	5 mm ***0.2 in***
Usable / pot life @23°C	2 hours
Working strength	23°C: 24 hours 60°C: 1 hour
Full cure	23°C: 72 hours 60°C: 2 hours

Typical Performance of Cured Adhesive

Shear strength* ISO 4587	Mild Steel: 18-22 N/mm² ***(2600-3200psi)*** FRP Glass/Polyester: 7-10 MPa ***(1000-1450psi)*** FRP Glass/Epoxy: 14-18 MPa ***(2000-2600psi)*** Carbon Fibre: 20-37 MPa ***(2900-5400psi)***
Peel strength (Aluminium)	150-230 N/25mm

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

Temperature Resistance



ET5429 can withstand higher temperatures for brief periods (such as for paint baking and wave soldering processes) providing the joint is not unduly stressed.

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.

Surface Preparation

Surfaces should be clean, dry and grease-free before applying the adhesive. Use a suitable solvent (such as acetone or isopropanol) 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 application ensure the resin and hardener are thoroughly mixed and in the correct proportion.
2. Apply the adhesive to one surface and avoid entrapping air.
3. Assemble 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 for at least 24 hours.

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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