

318-050 | 106-434

Permabond E01

TWO PART EPOXY RESIN

INTRODUCTION:

Permabond E01 has been designed for effecting fast repairs to a wide variety of surfaces or components.

Rapid Cure Speed

E01 cures to a handling strength in 3-5 minutes. This rapid cure means that parts can be assembled (with minimum Work In Progress), or effective repairs made (with minimum down time).

Simple and Convenient

E01 has a simple mix ratio (1:1 by volume) and is supplied in easy to use packaging. These range from "EDS" cartridges, which dispense metered and mixed adhesive, to bulk containers for the larger user.

Bonds to a wide assortment of different surfaces

E01 can be used to bond to many different surfaces including wood, metal, plastic, ceramic and glass.

Permabond E01 is often considered a "general purpose" adhesive for all manner of applications.

PHYSICAL PROPERTIES:

	Resin (A)	Hardener (B)	Mixed
Viscosity	60000mPa.s	12000	35000
Colour	Amber	Amber	White/*
*E01 undergoes a unique colour change showing users when it is thoroughly mixed (white) and when it reaches the end of its usable life (amber/clear).			
Specific Gravity	1.20	1.13	1.16
Chemical Composition	Based on Epoxy Resin		
Mix Ratio	By weight - 100 : 94 (Resin:Hardener) By volume - 1 : 1 (Resin:Hardener)		

PERFORMANCE: (typical values)

	@ 25°C	@ 60°C
Cure Speed		
Handling strength:	5 minutes	2 minutes
Full strength	24 hours	30 minutes

Usable Life @ 25°C	100ml -	3 minutes
	Thin film -	3 minutes

These are typical cure speeds.

Shear Strength Aluminium - 20N/mm²
Ultimate load will depend on the area being bonded.

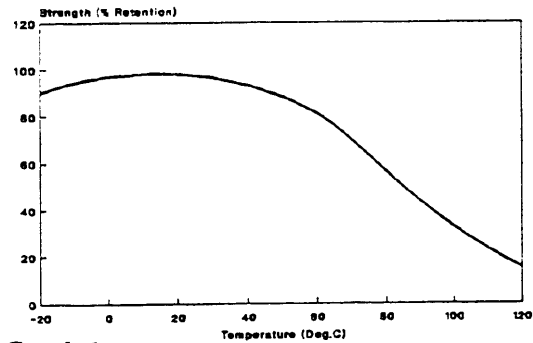
Maximum Gap Fill <1mm

Typical Service Temperature -55 to +100°C

Higher temperatures can be endured for short periods providing that the adhesive is not unduly stressed. (Max. 130°C).

See Graph 1 for further details

Typical % Shear Strength Retention with varying temperature.



Graph 1

Steel/Steel

ELECTRICAL PROPERTIES: (typical values)

Dielectric Strength	360 volts/0,001"
Volume Resistivity	2×10^{15} ohm-cm
Dielectric Constant	4.5 (at 1KHz)

All performance data are based on nationally and internationally recognised test methods.

318-050

TECHNICAL INFORMATION SHEET
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Permabond

INSTRUCTIONS FOR USE:

Surface Preparation:

For maximum performance, all surfaces should be thoroughly prepared for bonding. In general, roughening the surfaces and cleaning with an industrial solvent (eg Acetone, MEK, etc.), will result in a suitable surface for bonding.

Clean Up:

Uncured resin and hardener can be removed from the surfaces or tools with industrial solvents (eg Acetone, MEK, etc.)

Storage/Shelf Life:

Both resin and hardener components should be stored in original containers with caps/lids tightly fitted, out of direct sunlight, at temperatures between 5-25°C. Under these conditions, the shelf life will be 12 months from the date of despatch from Permabond. Never pour material back into the container once dispensed.

Application & Assembly:

1. Meter or weigh resin (A) and hardener (B) components in the correct ratio into a clean vessel or onto a flat surface and mix thoroughly using a suitable tool, until a uniform white colour is achieved.
2. After mixing, ensure that all the adhesive is used within the time shown above for "Usable Life".
3. Apply the adhesive to one of the prepared surfaces in continuous beads.
4. Assemble the components ensuring that the gap is completely filled without air entrapment. Clamp in position with light force, if required. Leave clamped for at least the period shown as "Handling Strength".

To eliminate metering and mixing consider using *E01* supplied in "EDS" cartridges. The *E01* can be dispensed directly onto the workpiece, which speeds up production, assists in raising quality and repeatability and can keep the components and workplace clean.

HEALTH & SAFETY:

Full information can be obtained from the Material Safety Data Sheet (M.S.D.S.) Users are reminded that all materials, whether innocuous or not, should be handled according to the principles of good industrial hygiene.

PERMABOND PRODUCT RANGE

Permabond - a division of National Starch & Chemical manufacture and market a wide range of adhesives and sealants to suit numerous engineering applications.

These include:

ANAEROBICS

For locking and sealing of metal parts, replacing traditional time consuming and expensive techniques. Typical applications include threadlocking, pipe sealing, gasketing and retaining.

TOUGHENED ACRYLICS FLEXON®

For structural bonding of engineering materials, such as metal, glass, ceramic and reinforced plastic, where high stress may be encountered. Often used to replace traditional jointing methods such as riveting and welding.

CYANOACRYLATES

For rapid bonding of many different materials including plastics and rubbers, helping to speed up production lines or reduce maintenance down time.

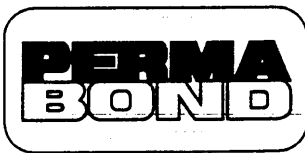
METAL REPAIR

For the repair of metalwork damaged with holes or cracks. Particularly useful for reclaiming damaged pipes, castings, flanges, or metallic vessels.

EPOXY RESINS

Single part epoxies for maximum performance, chemical and temperature resistance. Two part epoxies for versatility, as a wide variety of materials can be bonded. Particularly suitable where large surface areas or large gaps need to be filled.

For further information contact Permabond's Technical Department.



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