

Technical Data Sheet

TYPE: PB8

Revision Date: 20 June 2023
TDS no.: 22-01-034

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PRODUCT DESCRIPTION

PRIME-BOND PB8 5 Minute Epoxy Steel Structural Adhesive is a premium two part, high strength, metal-filled epoxy adhesive system. PRIME-BOND PB8 can be drilled, threaded, and machined once fully cured. It repairs, fills and bonds most metal surfaces. It is resistant to most shop fluids including fuels, oil, water, and solvents.

PRODUCT BENEFITS

- Will not shrink
- No clamping needed
- Non-flammable
- Dark grey color
- Impact resistant
- Water resistant
- High temperature resistant

TYPICAL PROPERTIES OF UNCURED MATERIAL

Chemical Type	/	Epoxy and Mercaptan/Amine	
Components	/	Two-component	
Appearance	Visual inspection	A Black	B O white/White
Mixed Density (g/cm ³)	GB/T 13354-1992	1.0	1.1
Mix Ratio by Volume(A:B)	/	1:1	
Odor	/	Mild	
Mixed Viscosity(25 @Cps)	GB/T 2794	45000-50000	
Flash Point	GB/T 30777-2014	See SDS	

TYPICAL CURING PERFORMANCE

Working Time 23min	/	3
Fixture Time 23min	/	5~6
Full Cure Time 23h	/	12~24
Final Color	Visual inspection	Dark gray

**Increasing the temperature helps the material to cure, but too high a temperature may cause the reaction to be too fast, produce internal stress, and affect the material properties, when curing at a lower temperature, the curing speed is slower, which may lead to incomplete curing, but the products cured at lower temperatures usually have better toughness and mechanical properties. The recommended curing temperature is the temperature listed in the table above, and the influence of other temperatures and environment on curing performance should be consulted by the technical department of Fanle.*

TYPICAL PERFORMANCE OF CURED MATERIAL

Hardness (Shore D)	GB/T 2411-2008	70
Shear Strength (MPa)	GB/T 7124-2008	≥16
Dielectric Strength (kV/mm)	/	≥22
Volume Resistivity (Ω·cm)	/	≥4.62×10 ¹⁴
Operating Temperature	/	-5~40
Resistance Temperature (°C)	/	-40 120

DIRECTIONS FOR USE

Preliminary Statement:

Prior to application it is necessary to read the Material Safety Data Sheet for information about precautionary measures and safety recommendations. Also, for chemical products exempt from compulsory labeling, the relevant precautions should always be observed.

Pretesting procedures:

To eliminate potential problems on-site, Fenloc samples various materials to which the adhesive is applied, pre-determines the best adhesive to use, and conducts material compatibility tests to develop the best surface preparation method to obtain the best bonding performance. Please consult Fenloc technicians for details.

Surface Preparation:

Surfaces should be free of heavy deposits of grease, oil, dirt, or other contaminants, or cleaned with industrial cleaning equipment such as vapor phase degreasers or hot aqueous baths. Abrading or roughing the surfaces of metals will increase the microscopic bond area significantly and optimize the bond strength.

Mixing Instructions:

25 ml Syringes Packaging

1. Open the nozzle in front of the syringe, remove the mixing bar attached to the plunger, and push the pusher to squeeze the material into a properly sized container.
2. Use the mixing rod on the syringe handle to mix the gel vigorously until the gel is well mixed.
3. Apply the colloid to the sizing surface and install the adhesive parts during the operation time;
4. Apply a certain amount of pressure and hold it for a period of time to ensure that the adhesive does not displace

50 ml /400ml Cartridges

1. Attach the cartridge to a manual or pneumatic dispenser
 - (b) Open the nozzle and install the nozzle;
 - (c) Extrude the gel and mix it evenly, if the mixing nozzle is installed, remove the uneven part of the front end and apply the gel.
 - (d) Hit the adhesive on the adhesive surface, install the adhesive and apply continuous pressure to ensure that the adhesive does not displace

For very large gaps:

- (a) Apply epoxy to both surfaces
- (b) Spread to cover entire area OR make a bead pattern to allow flow throughout the joint Let bonded assemblies stand for recommended functional cure time prior to handling. Can withstand processing forces Do not drop, shock load, or heavily load

PACKAGING INFORMATION

25 ml/syringes 50 ml/cartridge 400 ml/cartridge

For other packaging information, please consult Panle service personnel.

STORAGE

Store product in the unopened container in a dry location. Storage information may be indicated on the product container labeling. Optimal Storage: 10 °C to 32 °C. Storage below 10 °C or greater than 32 °C can adversely affect product properties. Material removed from containers may be contaminated during use. Do not return product to the original container. RIME-BONDP Corporation cannot assume responsibility for product which has been contaminated or stored under conditions other than those previously indicated. If additional information is required, please contact your Fenloc representative.

HEALTH & SAFETY IN USE

Allow adequate ventilation when using. Avoid prolonged skin contact. In case of eye contact, flush with water and seek medical attention. Keep away from children. This product is not recommended for use in pure oxygen and/or oxygen rich systems and should not be selected as an adhesive for chlorine or other strong oxidizing materials. For safe handling information on this product, consult the Safety Data Sheet, (SDS). **DO NOT TAKE INTERNALLY. KEEP OUT OF THE REACH OF CHILDREN. For technical assistance, please call +27-823844256.**

CONVERSIONS

$(^{\circ}\text{C} \times 1.8) + 32 = ^{\circ}\text{F}$
 $\text{kV/mm} \times 25.4 = \text{V/mil}$
(b) $/ 25.4 =$
inches $\text{m} / 25.4$
= mil
 $\text{N} \times 0.225 = \text{lb}$
 $\text{N/mm} \times 5.71 =$
 lb/in $\text{N/mm}^2 \times 145 =$
 psi $\text{MPa} \times 145 =$
 psi $\text{N}\cdot\text{m} \times 8.851 =$
 $\text{lb}\cdot\text{in}$ $\text{N}\cdot\text{m} \times 0.738$
 $= \text{lb}\cdot\text{ft}$ $\text{N}\cdot\text{mm} \times$
 $0.142 = \text{oz}\cdot\text{in}$
 $\text{mPa}\cdot\text{s} = \text{cP}$

NOTE

The information and recommendations contained herein are based on our research and are believed to be accurate, but no warranty, express or implied, is made or should be inferred. Fenloc recommends purchasers/users should test the products to determine acceptable quality and suitability for the intended use. All adhesive/sealant applications should be tested under simulated or actual end use conditions to ensure the adhesive/sealant meets or exceeds all required project specifications. Since assembly conditions may be critical to adhesive/sealant performance, it is also recommended that testing be performed on specimens assembled under simulated or actual production conditions. Nothing contained herein shall be construed to imply the nonexistence of any relevant patents or to constitute a permission, inducement, or recommendation to practice any invention covered by any patent, without authority from the owner of the patent.