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# PRODUCT DATA

## PERMAWELD-Z

**PRODUCT NAME:** PERMAWELD-Z  
**A bonding agent for concrete**

**MANUFACTURER:** PRICE RESEARCH, LTD.  
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### PRODUCT DESCRIPTION:

A milky white, non-flammable, non-toxic liquid that has high adhesive strength when used as a bonding agent to structurally sound surfaces, such as concrete, stucco, masonry, plastic, etc.

PERMAWELD-Z mixes easily with Portland and Lumnite cement for patching, repairing or resurfacing old concrete; adds exceptional resiliency and toughness to the mix. PERMAWELD-Z is an emulsion of internally plasticized polymer resin. No re-emulsifiable high strength polymer, when cured, will withstand intermittent or continued exposure to water.

### IMPORTANT FACTS:

- Ready to use.
- Simply mix with cement, sand and water.
- Adheres to most surfaces
- Can be applied over damp or dry surfaces, unaffected by humidity or condensation.
- Forms a strong durable bond.
- Can be applied for exterior or interior use.
- Non-toxic and vermin proof.
- Non-flammable. Will not deteriorate.
- Not affected by most acids and alkalies.
- Never loses flexibility or adhesive strength. Will not crack or craze.
- Can be applied over previously painted surfaces which have been properly prepared.

### COMPLIANCE:

ASTM C-1059 Type 2, ASTM C-1042 Type 2, V.O.C. compliant

### USES:

1. As bonding agent for plaster and stucco.
2. Bonds new and old concrete.
3. Old concrete to old concrete.
4. New concrete to new concrete.
5. Excellent for masonry structure, bonding construction joints.
6. Prevention of cold joints in multiple pours, leveling floors, prior to secondary surfacing.
7. Skid proofing existing floors.
8. Finishing concrete block walls and patching of stuccoed walls.
9. Striping or bonding to asphalt surfaces.
10. To improve the adhesion of pneumatically applied mortar or concrete.

### SURFACE PREPARATION:

Surface must be thoroughly cleaned, free from dust, dirt, grease, wax, oil, etc.. Moisten the surface with water, especially if temperature is very high and the area to be surfaced is exceptionally dry. Allow the water to penetrate so it feels damp to the touch. Remove unsound concrete, loose material and foreign matter by scarifying or other mechanical means. All concrete, whether new or old, when cleaned, must be etched with a 10% muriatic acid solution. Thoroughly rinse with water to remove all traces of acid.

### MIXING AND PLACING:

For all applications as a bonding agent, PERMAWELD-Z is mixed to the following proportion by weight or by volume:

- 1 Part PERMAWELD-Z
- 5 Parts Portland cement
- 2 Parts fine sand (conforming to ASTM-C 144). Sufficient water to yield a desirable consistency.

**The PERMAWELD-Z bonding grout should be mixed to a thick creamy consistency.**

1. Dry blend cement and sand.
2. Pre-mix PERMAWELD-Z with approximately one part water (this will vary according to the amount of water in the sand). Add to the cement-sand blend and mix thoroughly by mechanical means.
3. Determine the amount of water required by a trial mix (for this purpose, 1/2 part water is added to the

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PERMAWELD-Z prior to the addition to the cement-sand blend). **4.** For routine batches, 80% of the total water required is mixed with PERMAWELD-Z for initial mixing. Use remaining 20% of water for final adjustment.

**For Best Results:**

● PERMAWELD-Z grout must be intimately scrubbed onto the prepared concrete surface. ● The surface of old concrete should be thoroughly moistened with water. ● Any puddles or standing water in small pits and crevices should be removed by mopping or blowing with air.

**TOPPING:**

The topping must be applied while the bonding grout is still soft and plastic. For an overlay of not over 1/2 inch, use a topping of the following proportion by weight or volume:

- 1 Part PERMAWELD-Z ● 5 Parts Portland cement
  - 15 Parts sand (conforming to ASTM 404, size No. 2). Sufficient water to yield trowelable consistency.
- For deeper resurfacing, thick patches and overlays, the topping may be proportioned with larger size aggregate suitable to the depth of the overlay.

**For Best Results:**

**1.** Avoid steel troweling. If needed, use minimum number of passes. Do not steel trowel after one to two hours. **2.** For thin resurfacing, wood floating alone, (immediately after screeding) will produce maximum bond and minimum shrinkage.

**SHOTCRETE:**

For optimum performance, the pneumatically applied mortar must adhere securely to the substrate. For economy, it is essential that the rebond, which usually amounts to 30%, be kept minimum.

The PERMAWELD-Z bonding grout provides the tenacity required to hold the pneumatic mortar as it is applies. Following mix is suggested for this purpose, by volume or by weight:

- 1 Part PERMAWELD-Z ● 5 Parts cement ● 2 Parts mason sand ● 1 Part water

While the PERMAWELD-Z grout is still soft and plastic, a conventional pneumatic mortar may be applied in the normal manner.

**BUILDING COLUMNS:**

This can conveniently be done by using the PERMAWELD-Z bonding grout or topping mix. **1.** For thickness grater than 1/2 inch, the PERMAWELD-Z bonding grout is suggested. **2.** For thickness less than 1/2 inch, PERMAWELD-Z topping mix is recommended.

**CONCRETE FINISHING:**

The following mix is suggested for concrete finishing, by volume or by weight:

- 1 Part PERMAWELD-Z ● 10 Parts Portland cement ● 10 Parts sand ● 4 Parts water (approximately)

Make to a stiff, but brushable, consistency. A mixture of grey and white Portland cement may be used, as required, to obtain the desired shade.

**WALK WAYS AND PLAZAWAYS:**

The use of PERMAWELD-Z provides excellent adhesion to the setting bed and strong, durable mortar joints. PERMAWELD-Z is widely used as an admixture in mortar for setting and grouting common or architectural brick or paver used for patios, plazas, walkways and similar placement. Color coordination may be achieved by using grey or whit cement in addition to mineral pigments. The following mix ratio is recommended, by volume or by weight:

- 1 Part PERMAWELD-Z ● 5 Parts cement ● 15 Parts sand (conforming to ASTM C-404, size No. 2).

Sufficient water to yield desirable consistency.

**LIMITATIONS:**

PERMAWELD-Z must be protected from freezing. Mix only in small batches, which may be used in 30 to 40 minutes.

**LIMITED GUARANTEE:**

Price Research, Ltd. has no control over the storage, handling or use of its products, thus the guarantee is limited to the purchase price of defective material only. All information and directions as contained in this bulletin and on the product label are intended for use by persons having experience and practical application skills.