

FOR MAXIMUM STRENGTH AND MINIMUM SET-UP TIME, THE A & B HALVES MUST BE MIXED THOROUGHLY.

- 1. Use equal parts of A & B.
- 2. Your hands should be clean and free from oil.
- 3. Tear, roll, fold, and knead the halves together vigorously.
- 4. MIX AT LEAST TWO MINUTES for a walnut-size piece. MIX AT LEAST 15 MINUTES FOR THE WHOLE POUND.
- 5. The warmer the temperature, the faster the epoxy putty will cure. At 75°F, the cure time is 60 minutes. Reducing the temperature 5°F will double the cure time. Use a hot air gun to shorten the time.

SURFACE PREPARATION

A clean, dry surface is a necessary prerequisite for adhesive bonding: On adhesive will either stick to the surface to which a bond is desired or to that film of extraneous material directly on that surface. Rarely can a structural adhesive penetrate through surface contaminants to provide an optimum bond on an unclean surface.

Porous materials are simple to bond to, providing they are dry. The surface should be sanded till clean and free from dust. Non-porous surfaces, such as found on metal and plastic materials, should be degreased, dried, and roughened by sanding, sandblasting or chemical etching; the etching being required for certain surfaces. The etched or sandblasted surfaces should be covered within a few hours of treatment to prevent contamination. Handlers should wear clean cotton gloves to prevent body oils from contaminating the clean surfaces.

Will cure underwater and is non-shrinking.

For best results, follow the procedure listed below, wherever practical.

ALUMINUM AND ALUMINUM ALLOYS

- 1. Degrease with trichoroethylene.
- 2. Dip in the following solution for ten minutes (for certain alloys, such as #360 only one to three minutes is required).

3 parts sodium dichromate 10 parts 96% sulfuric acid

20 parts water

(Be careful to dissolve sodium dichromate in the water, then add the sulfuric acid slowly.)

- 3. Rinse in ambient tap water.
- 4. Rinse in hot (150° 170°) distilled water.
- 5. Air dry.

COPPER, BRASS AND OTHER COPPER ALLOYS

- 1. Degrease with trichloroethylene.
- 2. Dip in a solution consisting of 6 parts ferric chloride, 30 parts concentrated nitric acid and 200 parts water. (Dissolve the ferric chloride in the water, add the nitric acid slowly). OR dip in a 25% aqueous solution of ammonium persulfate for 1 to 2 minutes.
- 3. Rinse with distilled water and dry.

FERROUS ALLOYS OTHER THAN STAINLESS

- 1. Degrease with trichloroethylene.
- 2. Sandblast, sand (100 grit) or etch in 15% aqueous hydrochloric acid (equal parts concentrated muriatic acid and water) for 10 minutes. Etched surfaces should be rinsed immediately and dried with hot air. Freshly sandblasted or etched steel begins to rust immediately, therefore, adhesive should be applied as soon as the surface has been prepared.

POLAR THERMOPLASTICS (NYLON, ABS, POLYCARBONATE, ACRYLATE)

- 1. Degrease with acetone, methylethylketone or trichorethylene.
- 2. Mechanically abrade.
- 3. Degrease

THERMOSET PLASTICS (EPOXIES, POLYURETHANE, POLYESTER, MELAMINE, PHENOLIC)

- 1. Degrease with acetone, methylethylketone or trichloroethylene.
- 2. Mechanically abrade (sandblast).
- 3. Degrease.

STAINLESS STEEL, CHROMIUM

- 1. Degrease with trichloroethylene.
- 2. Etch with concentrated hydrochloric or muriatic acid for 15 minutes at room temperature or with a solution consisting of 90 parts water, 40 parts 96% sulfuric acid, and 0.2 parts Nacconal NR (National Aniline) for 10 minutes at 150°F, followed by 10 minutes at room temperature in a solution consisting of 90 parts water, 15 parts 70% nitric acid and 2 parts 48% hydrofluoric acid.
- 3. Rinse in hot distilled water and dry with hot air.

STONE, CERAMICS, GLASS

- 1. Degrease with trichloroethylene.
- 2. Wire brush (stone), sandblast.
- 3. Rinse with water and dry.

ZINC, LEAD, NICKEL AND TIN

- 1. Degrease
- 2. Mechanically abrade (sandblast).
- 3. Degrease

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

- Store in cool, dry area in tightly closed containers. Optimum storage is 65° 80°F.
- EYE CONTACT: May cause extreme irritation and/or burns. Flush immediately with copious amounts of water and seek prompt medical aid.
- SKIN CONTACT: May cause irritation and/or mild burns. Wash immediately with waterless hand cleaners, followed by soap and water. Wash clothing before wearing again.
- INHALATION: Not likely a problem. Move to fresh air.
- INGESTION: No known adverse effects, but could cause gastro-intestinal disturbances. Seek medical aid if unusual symptoms develop. Induce vomiting only on the advice of a physician.