UI-5822
LIQUID CASTABLE ELASTOMER
82 SHORE A

1. PRODUCT:
   UI-5822 is a two component, polyether based, liquid
   urethane casting system used for a variety of applica-
   tions. It is 100% solids and contains no MDI or MCA.

2. KEY FEATURES:
   - Easy to Mix and Use
   - Low Viscosity
   - Long Gel Time
   - Available in a Variety of Colors
   - Good Chemical Resistance
   - Excellent Tear Strength
   - Low Shrink

3. SUGGESTED APPLICATIONS:
   - Potting and Encapsulating
   - Tooling
   - Wheels
   - Filter Frames
   - Concrete Stamp Pads
   - Molds
   - Bumper Pads
   - Gaskets and Diaphragms

4. SHELF LIFE:
   Shelf life of UI-5822 is one (1) year from shipping, pro-
   viding it is stored in an cool dry place in unopened con-
   tainers.

5. STANDARD COLORS:
   - White
   - Black
   - Red
   - Blue
   - Yellow

6. STANDARD PACKAGING:
   - Quart Kit
   - Gallon Kit
   - 5 Gallon Pail Packs
     (Pail of A and Pail of B)
   - 55 Gallon Drum Packs
     (Drum of A and Drum of B)

7. GENERAL PROCESSING INFORMATION:
   A. PROCESSING TEMPERATURES: The higher the
      temperatures, the faster the reaction rates. Re-
      action rates are influenced by the temperature
      of the components and mold, the size of the batch
      being processed, the shape of the cavity being
      filled and the ambient conditions.
   B. SURFACE PREPARATION FOR MOLDS: Porous
      surfaces, i.e., wood and plaster in contact with UI-
      5822 must be well sealed with a urethane compat-
      ible sealer. An acrylic sealer is generally used.
      Allow final sealer coat to dry for 30 - 45 minutes be-
      fore applying a suitable release agent.
   C. MOLD RELEASE AGENTS: The user must perform
      all pertinent tests in order to determine the
      suitability of those products in the particular
      application. Silicone type release agents such as
      UI-9900 can be used where neither adhesion nor
      paintability of the molded part is required. A non
      silicone type may be used where paintability of the
      molded part is required. Frequent mold cleaning
      may be necessary to prevent mold release agent
      build up.
   D. ADHESION TO METAL AND WOOD: In order to
      ensure good polymer adhesion, substrate must be
      free of rust, oils and other impurities. Substrate
      may be sanded and degreased with a solvent such
      as Methyl Ethyl Ketone (MEK). Priming steel and
      wood with a urethane compatible primer such as
      UI-9906 will enhance polymer adhesion and ap-
      plication longevity. Other materials being primed
      may require experimentation in order to ensure op-
      timum polymer adhesion. For further information
      regarding primers, contact Preformed Line
      Products’ Technical Service Department.
   E. WEIGHT RATIO: Must be maintained within ±
      2.0% of Part A and Part B. Deviation from the ratio
      and processing conditions recommended herein
      will alter the properties of this product.
   F. CAST PARTS: To produce cast parts without bub-
      bles, the mixture of Part A and Part B should be
      placed under a vacuum prior to pouring into the
      mold. The addition of UI-9908 Bubble Release
      Agent up to 0.5% by weight or about 2.5 ml per
      pound of mixed system will facilitate air release
      under vacuum. The ratio of UI-9908 may vary de-
      pending on individual requirements and the amount
      of material being degassed.
   G. HAND PROCESSING PROCEDURE: For quart and
      gallon kits, pour Part A into Part B container. For
      half packs and drum packs, weigh Part A and Part
      B to exact ratio by weight and pour into a clean, non
      porous container. The two components should be
      mixed thoroughly by hand, paddle or power mixer
      for specified mix time (see Properties section).
      Caution must be used to generate only a small vortex
      when mixing to prevent mixing excess
      air into the mixture. Scrape the sides and bottom
      of the mixing container periodically as unmixed
      material has a tendency to adhere to surfaces of
      mixing container. Pour the mixed material into the
      prepared mold, pattern or cavity and allow to cure.
      Do not scrape material from sides of mixing con-
      tainer while pouring material. Proper application of
      a parting agent is required for satisfactory release
      from mold.
H. MAINTENANCE AND CLEAN UP: Clean up of the automatic mixing equipment can be performed with the use of a non flammable cleaning solvent, such as Methylene Chloride. Methylene Chloride is a hazardous chemical, therefore chemical data, legislative acts, regulatory guidelines and manufacturer's precautions must be read and understood before use. Hand mixing equipment may be cleaned with a cleaning solvent such as Methyl Ethyl Ketone (MEK). MEK is a highly flammable chemical, therefore necessary safety precautions must be exercised.

I. PRECAUTIONS: Normal handling precautions must be exercised. Use in a well ventilated area and wash hands before eating or smoking. Personnel handling UI-5822 must wear protective gloves, glasses and clothing. Do not burn UI-5822 as it will release toxic vapors. Read Material Safety Data Sheet before using.

8. TECHNICAL SERVICE:
Technical assistance is available by contacting Preformed Line Products' Technical Service Department.

9. STORAGE, SAFETY AND HANDLING:
Store UI-5822 in a dry cool area. Avoid storage temperatures above 85°F and below 50°F. Before using, read carefully Preformed Line Products' General Information Bulletin on Safety, Handling, Storage, Packaging, Technical Service and Warranty. Material Safety Data available upon request. UI-5822 is packaged in sealed containers with a nitrogen blanket to prevent moisture contamination. Therefore, containers should not be opened until ready to use. If the total amount of either Part A or Part B is not used initially, the remaining portion of unmixed material should be re-blanketed with nitrogen of UI-9904 "Magic Blanket", an inert gas available in aerosol cans.

10. PREFORMED LINE PRODUCTS AVAILABLE FOR USE WITH UI-5822:
UI-9900 Silicone Mold Release
UI-9904 "Magic Blanket" Aerosol Inert Gas
UI-9906 Adhesion Promoter
UI-9908 Bubble Release Agent

11. WARRANTY:
The statements made herein are based on our research and the research of others and are believed to be accurate. No guarantee of their accuracy is made, however. Neither the seller nor the manufacturer has any knowledge or control concerning the purchaser's use of the product. No express warranty is made by the seller or the manufacturer with respect to the results of any use of the product. Neither seller nor manufacturer assumes any liability for personal injury, loss or damage resulting from the use of the product. In the event that the product shall prove defective, the buyer's exclusive remedy shall be repayment of the purchase price, or, at the manufacturer's option, replacement of the non-conforming product. The buyer expressly waives any claim to additional damages, including consequential damages. Warranty claims are void unless made in writing within thirty (30) days after purchase. Warranty runs exclusively to the benefit of the original buyer.

NOTE:
Prior to use, customer should thoroughly evaluate to determine suitability for use intended.

| 12. PHYSICAL PROPERTIES OF UI-5822 (TYPICAL) |
| PROPERTY | RESULTS | ASTM TEST METHOD |
| Shore Hardness | 82 ± 2 A | D-2240 |
| Standard Color | White, Black, Red, Blue, Yellow | — |
| Mix Ratio Part A to Part B By Weight | 62A/100B | — |
| By Volume | 53A/100B | — |
| Weight per Gallon | — | — |
| Part A | 10.0 lbs | — |
| Part B | 8.4 lbs | — |
| Mix Time | 3 min | D-2471 |
| Pot Life | 20 min | D-2471 |
| Gel Time (1 lb, mass @ 75°F) | 30 - 40 min | — |
| Demold Time (minimum) @ 77°F (25°C) | 4 hours | — |
| @ 175°F (79°C) | 1 - 2 hours | — |
| Complete Cure @ 75°F (25°C) | 7 days | — |
| @175°F (25°C) | 2 - 3 days | — |
| Peak Exotherm | — | — |
| Elongation, Ultimate | 125% | D-412 |
| Tensile Strength | 1185 psi | D-412 |
| Modulus | 973 psi | D-470 |
| V - Tear Strength | 162 pli | D-2939 |
| Viscosity | — | — |
| Part A | 400 cps | — |
| Part B | 800 cps | — |
| Specific Gravity | — | — |
| Part A | 1.2 | — |
| Part B | 1.12 | — |
| Abrasion Resistance (Tabor) | 4.5 | CS-17-Mg lost; 1000 Grn/1000 Rev |
| Resilience (Rebound) | 54% | Bashore |
| Linear Shrinkage | less than 0.003 in/in | D-2566 |
| Shelf Life (Unopened containers) | 1 year | — |
| Solids | 100% | — |

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