

## GSP 1603-3

### POLYURETHANE POTTING COMPOUND

90 Shore A, 1-2 hour Gel Time

#### GENERAL DESCRIPTION

GSP 1603-3 is a two-part polyurethane compound used for electrical potting encapsulation. This system offers one to two hours of working time and is ideal for hand mixed applications.

#### FEATURES

Contains no solvents  
Excellent adhesion  
Excellent hydrolytic stability

#### COMPONENT PROPERTIES

PROPERTY	GSP 1603-3 PART A	GSP 1603-3 PART B
Shelf Life	6 months	12 months
Density (lb/gal)	9.8	12.9
Viscosity (cps)	200	10000
Color	Amber	Black

#### HANDLING PROPERTIES

PROPERTY	GSP 1603-3
Mix Ratio by Weight	24 A : 100 B
Gel Time	1 – 2 hours
Cure Time	24 hours @ room temperature

#### PHYSICAL PROPERTIES

PROPERTY	GSP 1603-3
Hardness	85 – 95 Shore A
Color	Black
Water Absorption	< 0.1%
Dielectric Strength (V/mil)	323 (ASTM D149-97a Method A)
Dielectric Constant (k)	3.83 (ASTM D150-98)
Volume Resistivity ( $\Omega \cdot \text{cm}$ )	4.932 E+15 (ASTM D257-99)
Coefficient of Thermal Expansion (in/C)	0.0012
Thermal Conductivity (cal/(sec)(sq cm)(C)(cm))	$\geq 14\text{E}+4$
Temperature Range of Use ( $^{\circ}\text{C}$ )	-40 – +80

## INSTRUCTIONS FOR USE

**TO MIX BY HAND:** Proportion out components according to parts by weight or volume ratio into a non-reactive container (polyethylene, polypropylene or metal de-rimmed can). Container should be about five times larger than the volume of mixed material. Mix components very thoroughly, preferably with a metal spatula, scraping the sides and bottom of the container to incorporate all material.

Remove the air entrapped during mixing by placing the container of mixed material into a vacuum chamber. Under vacuum, the level of mixed material will rise and then drop with strong, bubble-breaking action. Do not allow the contents to rise over the top of the container while removing the air. Allow the material to de-gas (de-air) until the liquid level drops and bubbling is minimal. At this point, release the vacuum. If working time allows, transfer material to a clean container, without scraping the sides or bottom, before applying. If working time does not allow transfer, material should be used immediately.

**Note:** During application, do not scrape the sides or bottom of the container used for mixing. Residual amounts of poorly mixed material may be incorporated. Such material may fail to cure completely and may not achieve full physical properties. Additionally, do not mix more than can be applied in ten minutes. The gel time is between ten and thirty minutes, but will vary depending on the mass mixed and ambient temperature.

**READ AND UNDERSTAND MATERIAL SAFETY DATA SHEET (MSDS) PRIOR TO USING THIS PRODUCT.**

### NOTICE TO USER:

The following is made in lieu of all warranties, expressed or implied. It is the customer's responsibility to determine fitness of use for all GSP products by directly testing the materials first-hand for each application. Please fully evaluate the materials so as to convince yourself of appropriate and adequate performance. Before using, customer shall determine the suitability of the product for the intended use, and customer assumes all risks and liability whatsoever in connection therewith.

The only obligation of the seller or manufacturer shall be to replace such quantity of product proved to be defective. Neither seller nor manufacturer shall be liable for any injury, loss or damage, direct or consequential, arising out of the use of or the inability to use the product. The foregoing may not be altered except by an agreement signed by officers/owners of G.S. Polymers, Inc.

**Prepared: 8/7/2007 MPS**

**Revised: R6-7/20/11 AG**