GS POLYMERS
Polyurethane & Epoxy Products

Technical Data Sheet

GSP 1460-6

POLYURETHANE POTTING/ENCAPSULANT SYSTEM

60 Shore D, Polyurethane Potting System

GENERAL DESCRIPTION

GSP 1460-6 is a two-component, polyurethane potting system developed for use as an electronic/electrical potting encapsulant for stress sensitive components. **GSP 1460-6** has excellent hydrolytic stability while maintaining very good flexibility and electrical properties.

FEATURES

Contains no solvents
Cures rapidly
Excellent hydrolytic resistance

APPLICATIONS

Ballasts
Transformers
PCBs

COMPONENT PROPERTIES

PROPERTY	GSP 1460-6 PART A	GSP 1460-6 PART B
Shelf Life	6 months	6 months
Density (lb/gal)	9.7	8.3
Viscosity (cps)	3500	4000
Color	Amber	Black

HANDLING PROPERTIES

PROPERTY	GSP 1460-6
Mix Ratio by Weight	100 A : 84 B
Mix Ratio by Volume	1 A : 1 B
Gel Time	15 minutes
Cure Time	24 hours @ room temperature 3 hours @ 150°F

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PHYSICAL PROPERTIES

PROPERTY	GSP 1460-6
Color	Black
Shore D Hardness	66D
% Water Absorption @ 24 hour exposure	< 0.1
Dielectric Strength (V/mil), ASTM D149-97a Method A	323
Dielectric Constant (k), ASTM D150-96	
100 hz	5.3
1K hz	4.3
10K hz	3.8
100K hz	3.8
Dissipation Factor, ASTM D150-96	
100 hz	0.03
1K hz	0.14
10K hz	0.10
100K hz	0.08
Volume Resistivity (Ω·cm), ASTM D257-99	4.932E^15
Coefficient of Thermal Expansion (in/°C)	0.0012
Thermal Conductivity (cal/ (sec)(sq cm)(°C)(cm))	>/= 14E^4
Temperature Range of Use (°C)	-40 to 80

* Properties are extrapolated from the particular urethane chemistry used in **GSP 1460-6**. The data/values reflects those cured properties which are typical to what would be expected.

INSTRUCTIONS FOR USE

TO MIX BY HAND: This material is not recommended to be hand mixed due to the rapid gel time. Preferred packaging is in side-by-side tubes with a static nozzle or dispensing using meter-mix equipment.

PROCESSING PARAMETERS (65-90°F):

Mix ratio by Weight: **100** parts by weight GSP 1460-6 to **84** parts by weight GSP 1460-6 part B.

Mix ratio by Volume: **1** part by volume GSP 1460-6 to **1** part by volume GSP 1460-6 part B.

Pot Life: Do not mix more than can be applied in 5 minutes. Gel time is 15 minutes, but will vary depending on the mass mixed and ambient temperature.

Side-by-Side (SBS) Tube Preparation: Prepare SBS tubes by removing the tip cap. Extrude a small amount of material until an even flow from both tip openings is apparent. Attach the static nozzle and prime by extruding a small amount of material through the static nozzle. Inject mold with mixed material from the nozzle. Care should be taken as to not entrap air. If sufficient material remains in the SBS tubes, remove the static nozzle, clean opening carefully (as to not cross-contaminate) and attach a cleaned tip cap.

Note: This material has a rapid gel time and de-airing may not be possible. Processing parameters should be developed along with optimized mold configurations to allow for using rapid molding materials. If possible, blanket GSP 1460-6 part A under nitrogen gas prior to storage. Store material in a cool, dry area with very low moisture/humidity.

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

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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.

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