Product Datasheet

SP&S Specialty Polymers and Services

RoHS 76/769/EEC

LiQUiDWELD™ 127 A/B Cool Grey

2 PART EPOXY POTTING SYSTEM – IMPACT AND THERMAL SHOCK RESISTANT

Liquidweld 127 A/B Cool Grey is a flow viscosity, semi-flexible encapsulation system which produces tough castings with very good thermal aging and shock resistance. This system is designed as an excellent general-purpose casting system, particularly where pressure-sensitive components are to be encapsulated or where thermal shock or crack resistance is required. The Liquidweld 127 A/B has low shrinkage and excellent adhesion to most materials including metals, glass, and many plastics. .

The Liquidweld 127 A/B system is available in many standard and custom colors and the viscosity and flow properties can be factory adjusted to suit your application process. Please contact us to discuss your application if you'd like to receive samples of a custom color or to discuss the development of a custom variant that would be suitable for your application.

SUGGESTED APPLICATIONS:

- Small to medium volume potting or encapsulating applications such as transformers, switches, filters, capacitors, and modules.
- Sealing sensors, modules, and many other components

HANDLING PROPERTIES	VALUE	TEST METHOD
Liquidweld 127A (resin)		
Visual Appearance	Grey liquid	
Density, Part A	1.830 g/cm³	ASTM E-201
Viscosity, Part A, at 25ºC	30,000 cps	ASTM D-2393
Flash Point	>135°C	ASTM D-92
Liquidweld 127B (hardener)		
Visual Appearance	Amber Liquid	
Density,	0.96 g/cm³	ASTM E-201
Viscosity, Part B, at 25ºC	1,000 cps	ASTM D-2393
Flash Point	>93°C	ASTM D-92
Mix Ratio (part by weight)	100A:15B	
Mix Ratio (part by volume)	100A:25B	
Viscosity Mixed at 25ºC	6,000 cps	
Gel time, 100 grams at 25ºC:	141 minutes	

Suggested Cure Conditions: 24 hours at room temperature or allow to gel for 1-2 hours at room temperature then heat cure for 4 hours at 65°C.

PHYSICAL PROPERTIES (Tested at 25°C unless otherwise noted)		TEST METHOD
Appearance	Grey uniform solid	Visual
Density	1.60 ± 0.05 g/ml or 99.9 ± 3 lbs./ft^3	ASTM D792
Glass Transition Temperature (Tg)	25ºC	ASTM D-648
Coefficient of Thermal Expansion (CTE):	40 ppm / ºC	ASTM E-831
Moisture absorption (24-hour immersion at 25C - % weight gain)	0.15%	ASTM D-570
Thermal Conductivity	28.0 x 10^{-4} cal/cm-sec-°C	ASTM F-433
Dielectric Constant at 25ºC & 60 Hz	2.70	ASTM D-150
Dissipation Factor at 25ºC & 60 Hz	0.05	ASTM D-150

NOTE : Values are based on laboratory or average production results – not for specification purposes.

SUGGESTED PROCESSING GUIDELINES:

To use, weigh Part A & Part B in the ratio suggested into a clean mixing container. Mixing containers should preferably be made of polypropylene, polyethylene, glass, or non-corroding metal (Stainless steel, aluminum, etc.). Always use weighing equipment having accuracy that is ±1% or less of the smallest quantity that you will be weighing. Blend Part A & B thoroughly using a spatula or stirring stick for at least 2-3 minutes using a kneading motion. Scrape the bottom and sides of the mixing container carefully and frequently to produce a uniform mixture.

This product is also available in Dual Syringe Cartridge, that can be applied by dispensing through static mixing nozzles. This eliminates the need for hand mixing. To use, remove the plastic nut holding the cartridge plug in place. Remove the plug and discard or save to use to re-plug the cartridge later. Attach a suitable static mixing nozzle, and put back in place the plastic nut in order to secure the static mixing nozzle in place. Dispense slowly at first with the nozzle pointed upwards at about 45 degrees to ensure initial even flow. Discard the first 1 inch (about 1-2 ml) of material which might not be completely mixed and then dispense as needed for your application.

Apply by pouring or dispensing into/onto your surface you are trying to repair or anchoring hole. For best adhesion, apply to clean dry surfaces only. If improved adhesion is desired, lightly abrade the surface to be bonded with a scouring pad, steel wool or fine sand paper. After abrasion, clean the surface of any loose material and degrease with solvent or detergent to remove any contaminants.

STORAGE GUIDELINES:
Store these materials in a clean, cool and dry environment in their tightly closed original containers. Protect from extended exposure to temperatures below 15ºC (59ºF). If the recommended storage conditions are observed the products will have a minimum shelf-life of 12 months from the date of shipment.

HANDLING PRECAUTIONS:
Mandatory and recommended industrial hygiene procedures should be followed whenever these products are being handled and processed. For additional information please consult the corresponding material safety data sheets.

SAFETY & PERSONAL HYGIENE:

Liquidweld 127A

WARNING! Causes serious eye damage. Causes skin irritation. May cause allergic skin reaction. Suspected of causing genetic defects. Toxic to aquatic life with long lasting effects. Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling. Notice! Contains crystalline silica. Breathing dust may cause cancer and delayed lung injury

Liquidweld 127B

DANGER! Causes severe skin burns and eye damage. May cause an allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation. Suspected of damaging fertility or the unborn child. Causes damage to organs. Causes damage to organs through prolonged or repeated exposure. Harmful in contact with skin. Toxic to aquatic life with long lasting effects. Do not get in eyes. Avoid contact with skin and clothing. Avoid breathing vapor and mist. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling.

FIRST AID
In case of contact:
Skin – Immediately wash skin thoroughly with mild soap and water. Remove contaminated clothing and wash before reuse. Destroy contaminated shoes and other articles made of leather.
Eyes – Immediately flush eyes with plenty of water for 15 minutes and get prompt medical attention.
Inhalation - Remove person to fresh air. Administer oxygen or artificial respiration if necessary. Call a physician.
Ingestion - Do not induce vomiting. Dilute with plenty of water and contact physician immediately. Never give anything by mouth to an unconscious person.

DISCLAIMER:
IMPORTANT: The following supercedes Buyer's documents. **SELLER / MANUFACTURER MAKES NO REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, INCLUDING OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE**. No statements herein are to be construed as inducements to infringe any relevant patent. Under no circumstances shall Seller / Manufacturer be liable for incidental, consequential or indirect damages for alleged negligence, breach of warranty, strict liability, tort or contract arising in connection with the product(s). Buyer's sole remedy and Seller's sole liability for any claims shall be Buyer's purchase price. Data and results presented are based on controlled or laboratory work and must be confirmed by Buyer by testing for its intended conditions of use. The product(s) has not been tested for, and is therefore not recommended for, uses for which prolonged contact with mucous membranes, abraded skin, or blood is intended; or for uses for which implantation within the human body is intended

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