TARGRAY

Silicone Junction Box Potting Agent

PSL110, a two-component neutral condensation cure silicone rubber, is an excellent candidate to consider for use as electric potting in junction boxes for the photovoltaic industry.

PSL110 typically cures at room temperature to form an elastic flame retardant rubber and adheres to various types of materials such as metals, plastics, glass and ceramics without the use of primers. In addition to its wide operating temperature, it has excellent UV stability and weathering properties.

Key Features and Typical Benefits

- Excellent adhesive properties: primerless adhesion to many types of substrates
- Low viscosity allows for excellent flowability
- Fast and adjustable cure rate
- Excellent deep section cure
- No cure inhibition
- Moisture proof coating of diodes and contacts in junction box
- 1mm: UL 94 HB, RTI 105°C, HAI/CTI=0, HWI=4

Typical Physical Properties

Uncured Properties (@23°C / 50% RH)		PSL110(A)	PSL110(B)
Appearance		White liquid	Blue-green liquid
Specific Gravity		1.20	1.04
Viscosity	mPa·s	4,000	10
Mixing Ratio by Weight	100:3	100	3
Viscosity After Mixing	mPa·s	3,500	
Pot Life	h	0.1	
Tack-free Time	Min	20	

Note: Typical property data values should not be used as specifications.

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Typical Physical Properties (cont'd)

Cured Properties (3 days 23°C / 50% RH)		
Appearance		Elastic rubber, blue-green
Density	g/cm^3	1.20
Hardness (Type A)		30
Tensile Strength	mPa	1.1
Elongation	%	120
Adhesive Lap Share Strength (AL)	mPa·s	0.8
Volume Resistivity	Ω cm	1.0×10^{15}
Dielectric Strength	kV/mm	20
Dielectric Constant (60 Hz)		3.2
Dissipation Factor (60 Hz)		0.02
Thermal Conductivity	W/(m·K)	0.27

(1) In-house test method

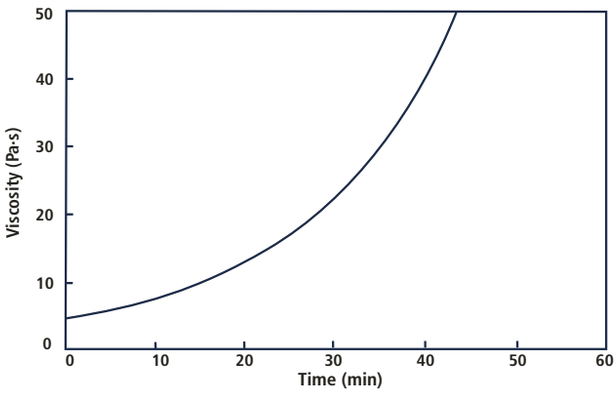
Note: Typical property data values should not be used as specifications.

Typical Adhesion Capacity

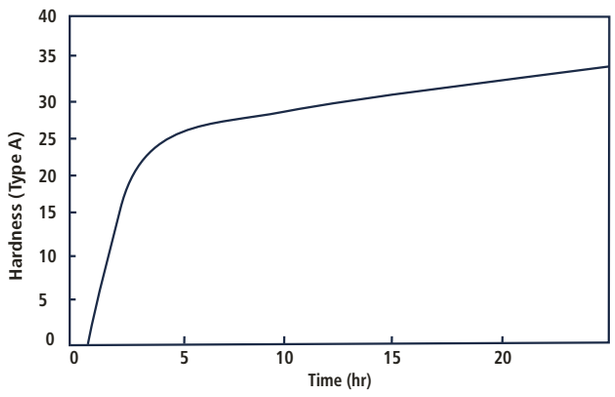
Aluminum	0
Stainless Steel	0
Copper	0
Polyester	0
Epoxy Resin	0
Polycarbonate	0
Acrylic Resin	0
ABS	0
PBT (Polybutylene terephthlate)	0
PPS (Polyphenylene sulfide)	0
PET (Polyethylene terephthlate)	0
PPO (Polyphenylene oxide)	0
Phenolic Resin	0
Nylon-6	0
Nylon-66	0
Glass	0
PVC (Polyvinylchloride)	0
Steel	0
PP (Polypropylene)	X
PE (Polyethylene)	X

0: **Excellent (Cohesive failure)** X: **Poor (Adhesive failure)**

Typical Cure Property: Viscosity (23°C, 50%RH)



Typical Cure Property: Hardness (23°C, 50%RH)



General Instructions For Use

Mixing

In case of filler sedimentation of (A) component during storage, mix it homogeneously before using. Select a mixing container 4-5 times larger than the volume of silicone rubber compound to be used. Weigh out (A) and (B) with clean tools, thoroughly mix them, scraping the sides and the bottom of the container carefully to produce a homogeneous mixture.

Deaeration and curing

Air entrapped during mixing should be removed to eliminate voids in the cured rubber. Expose the mixed material to a vacuum of about 20mm of mercury. The material will expand, crest, and recede to about the original level as the bubbles break. Degassing is usually complete about two minutes after frothing ceases. Pour the material in the part, and leave it at room temperature.

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Patent Status

Technical subject matter in this publication is described and protected by one or more pending US patent applications and foreign counterparts.

Product Safety, Handling and Storage

Customers considering the use of this product should review the latest Material Safety Data Sheet and label for product safety information, handling instructions, personal protective equipment if necessary, and any special storage conditions required. Material Safety Data Sheets are available at www.targray.com or, upon request, from any Targray representative. Use of other materials in conjunction with Targray products may require additional precautions. Please review and follow the safety information provided by the manufacturer of such other materials.

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