Rapidstick™ Silicone Potting Compound

PART NUMBER	AVAILABLE SIZE*
PCT-7000GY-200G	200g Kit (Includes 100g Part A and 100g Part B)
PCT-7000GY-1KG	1Kg Kit (Includes 500g Part A and 500g Part B)

**Available colours and/or sizes may change without notice.*

DESCRIPTION

Rapidstick™ Silicone Potting Compound is a room temperature curing RTV rubber which features excellent electrical insulation, high moisture resistance, and a wide temperature range of -60°C to 300°C. Being of relatively low viscosity, it allows complete encapsulation for weather-proofing and mechanical shock protection, and is non-corrosive to copper.

Silicone Potting Compound arrives in a two-part kit – Part A (Resin) and Part B (Hardener) – both parts of which are easily combined at a ratio of 1:1 (by volume). Mixing and application may be performed manually or mechanically, with the cured elastomer drying opaque and moderately hard.

TECHNICAL DATA

Composition: Polydimethylsiloxane Elastomer

	PART A	PART B
Appearance	Dark Grey	White
Specific Gravity (25°C)	1.07	1.01
Viscosity (@ 25°C)	9,400cps – 15,000cps	3,000cps – 4,500cps
Non-Volatile Content (2g/2hrs/150°C)	98%	98%
Mixing Ratio (Volume)	1:1 by Volume	
Pot Life (25°C, 100g)	1 hour	
Cure Condition (100g)	130°C: 15min, 100°C: 25min, 70°C: 35min RT: 16hrs	
Shrinkage	< 0.01%	
Weight Loss at High Temperatures (200°C, 5hrs)	< 0.5%	
Non-Volatile Content after Cured (2g/2hrs/150°C)	98%	
Water Absorption	< 0.1%	
Thermal Conductivity (W/m.k.)	1.0	
Linear Coefficient of Thermal Expansion (cm/cm/°C) (4-200°C)	1.9×10^{-4}	
Flammability	Recognised UL94 V-0 @6mm	

Cured Physical Properties

Colour	Grey
Density	1.04 (g/cm^3)
Gel Time (@ 25°C)	< 30mins
Complete Cure (@ 25°C)	3 – 7 Days
Tensile Strength	≥ 1.0 MPa
Hardness (Shore A)	20 – 30
Shear Strength	≥ 1.0 MPa
Peel Strength	≥ 3.0 N/mm
Tensile Elongation	≥ 250%
Temperature Range	-60 to +300°C
Volume Resistivity	≥ 1 x 1015 Ωm
Breakdown Voltage	≥ 16 Kv/mm
Dielectric Constant (@1.2Mhz)	2.9

The above mechanical and electrical properties have been measured at 25°C, RH of 55%, and after curing for 7 days

APPLICATION

Mixing the components:
Premix the contents of both containers to ensure any settled components are incorporated uniformly. Measure equal components of Part A and Part B by volume (not weight). Mix gently but thoroughly, stirring from the bottom of the container and around the sides until the colour is uniform. Mixing may be performed mechanically or by hand, but care should be taken to avoid entrapment of air.

Allow the product to stand for approx. 5 - 10 mins to de-air. For critical applications where small voids are undesirable, reduced pressure may be used. Partially filled containers should be subjected to a vacuum of 5 - 10mm of Hg for 5 - 10 minutes.

Once de-aired, pour the mixture slowly into cavities and tap gently to release any entrapped air pockets.

Curing the compound:
Initial cure is achieved in 16 - 24 hours at room temperature. To accelerate the cure, higher temperatures may be used. A temperature of 65^{o}C for 2 - 4 hours is recommended and is usually sufficient.

SHELF LIFE

Unopened: Approx. 24 months from date of manufacture.
Opened: Approx. 12 months.
Note: This product may not perform to given specifications once shelf life has been exceeded.

FIRST AID & SAFETY PRECAUTIONS

Always refer to Safety Data Sheet/s before use. Use proper Personal Protection Equipment. Do not get in eyes, on skin, or on clothing. Use with adequate ventilation. Avoid breathing fumes. Keep away from heat, sparks, open flames, and hot surfaces. This product may produce adverse health conditions, ranging from minor skin irritation to serious systemic effects. It should not be used, stored, or transported until the handling precautions and recommendations as stated in the Safety Data Sheet/s for this product have been fully understood by all persons who will work with the material.

STORAGE & TRANSPORT

Refer to Safety Data Sheet/s for recommendations. As a general precaution, keep containers tightly closed, protect from sunlight, and do not expose to temperatures exceeding 50°C. Containers should be secured and stored upright during transit.

DISCLAIMER

Every effort has been made to ensure the information provided in this document is accurate at the date of publication. Chemtools® Pty Ltd expressly recommends that the user make his/her own assessment to determine the suitability of the product for its intended purpose prior to application. Chemtools® Pty Ltd shall not be responsible for loss, damage, or injury, resulting from the reliance upon, or failure to adhere to, any recommendations or information contained herein; nor from abnormal use of the material; nor from any hazard inherent in the nature of the material.