A NEW FORCE IN CHEMICAL MANUFACTURING

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TECHNICAL DATA SHEET

MAY 2015

PRODUCT NAME

PCT-7000 Silicone Potting Compound

PRODUCT RANGE

Part Number	Available Size
PCT-7000GY-200G	200g Kit
PCT-7000GY-1KG	1Kg Kit
PCT-7000GY-5KG	5Kg Kit
PCT-7000GY-20KG	20Kg Kit

Refer to SDS for product safety guidelines

PCT-7000 Silicone Potting Compound

Description:
Chemtools PCT-7000 Silicone Potting Compound is a high quality, two component, grey RTV silicone rubber that features excellent electrical insulation, moisture and temperature resistance properties that is UL 94 V-0 recognised.

Application:
- Adhesive Joining
- Connectors
- Amps
- Transformers
- Bonding
- Sealing
- Encapsulation
- Potting
- Gasketing
- Sensors
- Relays
- Power Supplies
- Industrial Controls

It is ideal for potting and encapsulation of electronic and electrical modules for weather proofing and mechanical shock protection. The two components are low viscosity for ease of mixing and for the removal of entrapped air. The cure process is non-exothermic. The cured elastomer is opaque and moderately hard. It is non-corrosive to copper.

Composition:
- 1:1 Ratio (volume and Weight)
- 2-Part
- Polydimethylsiloxane elastomer

Application method:

- Manual mixing and dispensing
- Meter mix and dispensing systems

Physical Properties (Cured):

Colour - Part A:	Dark Grey
Colour - Part B:	White
Flammability(UL)	Recognised UL94 V-0 @6mm
Mix Ratio	1:1
Density:	1.04 (g/cm^3)
Gel Time:	<30 (mins @ 25C)
Complete Cure:	3 – 7 (days @ 25C)
Tensile Strength:	≥1.0 (MPa)
Hardness:	20 – 30 (Shore A)
Shear Strength:	≥1.0 (MPa)
Peel Strength:	≥3.0 (N/mm)
Tensile Elongation:	≥250 (%)
Temperature Range:	-60 to +300(C)
Volume Resistivity:	≥1.0x10^{15} (Ωm)
Breakdown Voltage:	≥16 (Kv/mm)
Dielectric Constant:	2.9 (@1.2MHz)

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

Characteristics:

	Part-A	**Part-B**
Appearance	Dark Grey	White Colour
Specific Gravity (25°C)	1.8	1.6
Viscosity (cps, 25°C)	9,400 – 15,000	3,000 – 4,500
Non Volatile Content (2g/2hrs/150 °C)	98%	98%
Mixing Ratio	1:1	
Pot life (25°C, 100g)	1 hr	
Cure Condition (100g)	130 °C: 15 min, 100 °C: 25 min, 70 °C: 35 min, R. T. : 16 hrs	
Shrinkage (%)	< 0.01	
Weight Loss at High Temp. 200°C 5hrs	< 0.5 %	
Non Volatile Content after Cured (%) (2g/2hrs/150 °C)	98	
Water absorption (%)	< 0.1	
Thermal Conductivity (Cal cm/sec2/ °C)	14 x 10-4	
Linear Coefficient of Thermal Expansion (cm/cm/ °C) (4-200 °C)	1.9 x 10-4	
Flame Resistant level 2 mm	UL 94 V0	

Instructions:

Mixing

- Premix the contents of both containers to ensure any settled components are incorporated uniformly.
- Measure out equal components of the product by weight or by volume and mix gently but thoroughly.. Stir up 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.
- De-air by allowing to stand for 5-10 minutes. 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.
- Pour slowly into the cavities and tap gently to release any entrapped air pockets.

Curing:
Initial cure is achieved in 16-24 hours at room temperature. To accelerate the cure, higher temperatures may be used, 2-4 hours at 65C is usually sufficient.

Storage:
Store in closed containers, undercover, in a cool and dry environment out of direct sunlight.
The shelf life of unopened containers stored at <25C is 1 year.
This product may settle during storage.
Do not return any unused material back into the containers.

Safety:
Avoid breathing any fumes, mists and vapours. Use of approved breathing apparatus is required for more than minimal exposure. Always work in areas with adequate ventilation to allow chemical fumes, and where applicable, solvent fumes to dissipate. The use of goggles, rubber gloves, is required. If the material gets into the eyes, flush thoroughly with clear water for fifteen minutes; then seek medical treatment. Avoid skin contact. Material may cause contact dermatitis. Always wash exposed areas immediately, using warm water and soap, followed by rinsing with clean water. Observe all safety precautions. It is important when using solvent based materials or solvents to keep away from open flames or ignition source.

Precautions:
This product capable of producing adverse health effects ranging from minor skin irritation to serious systemic effects. None of these materials should be used, stored, or transported until the handling precautions and recommendations as stated in the Safety Data Sheets (SDS) for this and all other products being used are understood by all persons who will work with the material.

Warranty:
All products purchased from or supplied by Chemtools are subject to terms and conditions set out in the contract. Chemtools warrants only that its product will meet those specifications designated as such herein or in other publications. All other information supplied by Chemtools is consider accurate but are furnished upon the express condition the customer shall make its own assessment to determine the product's suitability for a particular purpose. Chemtools makes no other warranty, either express or implied, including those regarding such other information, the data upon which the same is based, or the results to be obtained from the use thereof; that any product shall be merchantable or fit for any particular purpose; or that the use of such other information or product will not infringe any patent.