

# HYTERION S-245

## A VERSATILE HIGH STRENGTH SILICON RUBBER (CONDENSATION TYPE)

### PRODUCT DESCRIPTION

A two-component, room-temperature-vulcanising (RTV-2) silicone rubber. It is an excellent mould making material because it is easy to process, highly flexible, has good release properties and yields perfect reproductions. **Hyterion S-245** RTV-2 silicone rubber is tailored to all practical requirements, ensuring minimum effort and allowing castings of any complexity to be made. No matter what material is used for casting – whether wax, plaster, concrete, GRC, resins; low or large number of castings, maximum fidelity of reproduction is achieved.

### Key Performance Properties

- Excellent elongation, tear resistance and tensile strength
- Cure in contact with virtually all types of master patterns and moulding material
- Good release properties
- Cures at room temperature to optimum physical properties
- Easy to use by automatic dispensing equipment or hand mixing
- Excellent storage stability
- Add **Thixo-Additive** thickening agent for a brushable, high-build coating. Typically 1 to 1.5% addition.

### Typical Product Data

Typical Uncured Properties as supplies	Hyterion S-245	Catalyst
Colour	White	Yellow Clear
Viscosity (cps) @ 25°C	17,000+/-4000	15
Specific gravity	1.1 – 1.12	1.0
Storage time	12 months Min	6 months

### Typical Cured Properties

Resin	Hyterion S-245
Curing agent by weight (%)	2-3
Approximate pour time (25°C)	30-40 mins
Approximate demould time (25°C)	4 – 5 hours
Hardness (Shore A°)	20°
Tensile strength (MPa)	4.0+/-0.3
Elongation (%)	400
Tear strength (kN/m)	23+/-0
Shrinkage (%)	<0.3

## Processing

1. Measuring:

We recommend that **the components be weighed out exactly** since only strict observance of the mixing ratio will yield reproducible pot lives and curing times, and vulcanisate properties of the required standard.

2. Catalyst Addition Rates:

Summer 25°C	Working Time	Winter 12°C	Working Time
2-3%	30-40 minutes	2-3%	60-70 minutes

3. Mixing:

Use care in mixing to ensure that the Catalyst is thoroughly and evenly blended into the resin component.

4. De-aeration:

Flowable mixes should be de-aerated in a desiccator or vacuum chamber under a low-pressure 10 to 20 mbar in order to achieve bubble-free vulcanisates. It takes 5-10 minutes.

5. Applying:

After mixing and de-aeration, the material may be applied by pouring, brushing or dipping. For delicate patterns brush item initially with silicone resin and then pour additional resin to encapsulate.

6. Curing:

The material will cure at room temperature to form a durable, resilient silicone rubber. Typically 3-5 hours at 25°C.

**Pack Size:** 25kg pails with 1kg catalyst bottle.

### Mould Stability:

Hyterion Silicone resin is recommended for small to medium sized moulds – larger moulds will show greater shrinkage. For larger moulds >1.0m factor in mould shrinkage into the design of the mould or use a harder silicone resin to reduce shrinkage.

The mould may be revived using silicone oil.

### Trouble Shooting:

Inadequate mixing will result in a combination of a hard and dry and sticky mould. Using too much catalyst can result in excessive shrinkage.

### Caution:

Refer to the material safety data sheet. The curing agents contains tin soap. An odour of alcohol and fatty acid soap may be detectable. If skin is contacted by catalysed S-245 compound, wash immediately with soap and water. If eyes are contaminated, flush with clean water for 15 minutes and consult a physician. Avoid prolonged breathing of vapours from catalysed mix. Use with adequate ventilation. The bi-product of cure is a small amount of alcohol.

Rev 6

## POLYMER GROUP LTD

PO Box 204 106 Highbrook, Auckland 2161, New Zealand

Telephone: 64-9-274 1400 Fax: 64-9-274 1405 Email: sales@polymer.co.nz www.polymer.co.nz