

**PRO SILICON 35
RTV Addition Curing Silicone (Red)**

Rev: 3 01/20

Description

Pro Silicon 35 is a 2-part, platinum-catalysed, addition curing silicone rubber. Pro Silicon 35 features low viscosity and vacuum degassing is not required for most applications. Pro Silicon 35 has excellent tear resistance and exhibits low linear shrinkage (<0.1%). Pro Silicon 35 will reproduce fine details and is food safe. It is suitable for industrial and artistic applications. Pro Silicon 35 silicone can be used to cast a variety of materials including chocolate, wax, gypsum-based polymers, low melt alloys, urethane, epoxy and polyester resins. The silicone will cure in closed environments and is therefore suitable for potting, encapsulating and large castings. In some cases, a release agent, such as Mikon F57 aerosol wax or Sil 100 release, should be used to prolong mould life. Pro Sil 35 can be accelerated with heat to reduce the pot life and cure time. The silicone can be thickened with silicone thixotropic liquid, RTV Thixo, for brush-on applications. Certain substances and substrates may inhibit the cure of Pro Sil 35. Care must be taken to avoid contamination from tin curing silicones, chlorinated rubber compounds, PVC plasticizers, epoxy amines, sulphur containing materials and butyl elastomers.

Properties

Colour	Translucent or coloured
Cure Rubber Shore A Hardness	35 ± 2
Liquid Viscosity (Mpa.s)	5000 ± 1000
Cure Rubber Tear strength (kN/mm)	>20
Cure Rubber Tensile strength (MPa)	>5.0
Cure Rubber Elongation %	350
Working time at 25° C (minutes)	30
Curing time at 25° C (hours)	4-8

Mixing

The Part A and Part B must be measured out accurately using a gram scale. Mix the two components thoroughly, paying attention to the sides and bottom of the container. Do not mix more than can be used within the working time of the system.

Part by weight (Part A: Part B) 1:1**Preparation**

- Use clean, non-contaminated containers for mixing.
- Stir the Part A and Part B well before use.
- Add 100% by weight of the Part B to Part A.
- Stir the mixture well with a flat stirrer / stick until well mixed.
- De-air (vacuum degas), if required, in a vacuum chamber for 2-3 minutes at full vacuum.
- Pour the desired material in a steady stream from one end of the mould so that the material flows evenly over the pattern. This method will minimize entrapment of air / bubbles.
- Initial cure is reached in 6 hours at 25°C.
- For best results, allow the mould to air cure at ambient temperature for 24 hours before use.

Curing and post curing

Pro Silicon 35 must be allowed to cure for 6 hours at room temperature (25°C) before demoulding. Do not cure rubber if the ambient temperature is less than 18°C. The demould time can be greatly reduced by applying heat up to 80°C. Demould time will vary depending on mould thickness and temperature. Post curing will stabilize and enhances the physical properties of the silicone rubber.

Thickening

RTV Thixo is used for thickening Pro Silicon 35 silicone, such as when making brush-on moulds. Different viscosities can be attained by varying the amount of thixotropic agent, but 0.2% is typical. Wait for the rubber to become “tacky” before applying additional coats, with a final mould thickness of at least 1 cm. A support shell is normally required once the rubber has cured overnight.

Cure inhibition

Addition cured silicone rubber may be inhibited by certain contaminants in or on the part to be moulded resulting in tackiness at the interface or a total lack of cure. Latex, sulphur clays, some woods, newly cast polyester, epoxy or urethane rubber may cause inhibition. If compatibility between the rubber and the surface is unknown, a test is required by applying a small amount of rubber onto the part. Inhibition has occurred if the rubber is sticky after the recommended cure time has passed.

Health and Safety

Use in a properly ventilated area. Wear safety glasses, long sleeves and nitrile rubber gloves to minimize contamination risk. Wear nitrile gloves only (such as Aerontec Tuff Gloves), as latex gloves may inhibit the cure of the rubber.

Storage

The silicone resin and catalyst should be kept in securely closed containers during transport and storage. Any accidental spillage should be soaked up with absorbent material (sand, sawdust etc.) Suitable long-term storage conditions will result in a shelf life of one year for both Part A and Part B. Storage should be in a cool dry place out of direct sunlight. The storage temperature should be maintained between 10°C and 25°C, as higher temperatures will thicken the material and reduce the shelf life. Before storing, moulds should be cleaned with a soap solution and wiped dry. Two or more-part moulds should be stored assembled to prevent distortion. Moulds should be stored on a level surface in a cool, dry environment.

All statements, technical information and recommendations, including storage, contained in this publication are based on tests believed to be reliable, but their accuracy and/or completeness are not guaranteed. The user shall determine the suitability of this particular purpose and shall assume all risk and liability in connection herewith. The information contained herein is under constant review and liable to be modified from time to time.