TAP Platinum Silicone

TAP Platinum Silicone is a bi-component addition (platinum) cured RTV silicone rubber which vulcanizes at room temperature. It is translucent, which allows viewing of the object being molded. Due to considerable fluidity it is recommended for the duplication of models with accentuated undercuts. For vertical applications, silicone can be thickened to a non-sag paste by adding TAP thixotropic additive. This silicone has the unique property of not sticking to itself. This makes it ideal for two-part molds. If you are applying layers, do so before silicone cures. Otherwise the layers will de-laminate.

Platinum cured silicone offers superior performance:

Excellent mechanical characteristics (tear resistance, flexibility, etc.)

Excellent dimensional stability (shrinking ,0.01%)

Much greater mold durability for longer production runs

Easy 1-to-1 mix ratio

100% non-toxic

Low viscosity, so no need to de-air

Compatible with plasters, coatings, polyurethane, polyester, and epoxy resins.

Main Application Sectors

- Mechanical due to its high deadening power
- Electronic due to its good resistance to high temperatures
- Tampography due to its high mechanical resistance and excellent ink transfer property
- Moldmaking due to its considerable precision in reproduction and high dimensional stability
- Podology due to its softness

Properties

- Excellent for two-part molds. Mold release not required between cured layers.
- High chemical resistance to the aggressive components of some types of resin
- High level of accuracy in reproduction
- High dimensional stability over time
- Considerable resistance to high temperatures and to ageing
- Excellent non-stick effect

Chemical and Physical Characteristics

Mixing ratio 1:1

900 - 1100 cP Viscosity of the mix pre-catalisation Mixing time at 23 °C (73 °F) 1 minute Working time at 23 °C (73 °F) 15 – 18 minutes Setting time at 23 °C (73 °F) 2 hours Hardness Shore-A after 24 hours $8 \pm 1 ShA$ Tensile strength 218 psi

Elongation at break 280% Tear resistance (Die B) $17 \pm 3 \, ppi$ Tear resistance (Die C) 17 ± 3 ppi Maximum Casting Temperature 500°F

~15 fl oz. or ~444 cc. Volume per pound

(see back)



Material that causes problems

Platinum cure silicone can be inhibited (prevented from curing) if it comes in contact with certain materials. (Note: To seal a model, use acrylic paint—not latex or polyurethane.)

For proper cure, avoid the following materials:

TIN CONTAINING COMPOUNDS

Condensation cure silicones

SULFUR CONTAINING COMPOUNDS

- Thiols - Sulfides - Sulfates - Sulfites
- Thioureas

Latex (gloves, tubing, paint, etc. Note: some aerosol paints contains latex)

Wood

Natural Rubber

PVC (plasticized)

Neoprene rubber

NITROGEN CONTAINING COMPOUNDS

Epoxy/amine cure materials

URETHANES (ISO-Cyanates)

Polyurethane Paint **Urethane RTV**

UNSATURATED HYDROCARBON PLATIZERS

HIGH ACID CONTENT PVC

Other materials which have been found to inhibit the cure of two-compound addition cure silicones:

- Dow Corning® 630 protective coating
- Dow Corning® 3110, 3111, 3112, 3116, and 3120 RTV silicone rubber cured with Dow Corning
- RTV catalysts S, F, or H; cured seven days at room temperature (Dow Corning 3110, 3111, 3112, 3116, and 3120 RTV silicone rubbers cured with Dow Corning RTV catalyst S, F, and H at room temperature plus 4 hrs at 150°C do not inhibit cure.)
- Polysulfide MIL-S-8516
- Humiseal® 1B-27 coating
- Mystik[®] 6207 tape, Mystik[®] 6215 tape
- Scotch® cellophane tape, Scotch® 360 tape
- Permacel® masking tape
- Vinyl electric tape
- Pliobond® adhesive
- Buna N rubber
- GRS rubber. Natural rubber
- Viton A rubber
- Acid core solder flux, Rosin core solder flux
- Some pigments and dyes

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