

Key Features

AMSIL Eco Silicones are 2-part RTV (room temperature vulcanizing) tin/condensation cure entry level mould making silicones. These silicone's can be poured or brushed onto a variety of surfaces to produce block, cavity or brush-on moulds. A variety of materials like polyurethane, polyester, epoxy, gypsum plaster, cement, wax, soap, low temperature melt alloys etc. can be cast into these moulds.

Physical Properties

Product	Mix Ratio (Parts By Weight)	* Pot life	*Demould time	CPS viscosity	Shore A Hardness +/- 2	Tear Strength N/mm	Elongation at break	Linear Shrinkage	Specific Gravity
Amsil Eco 10	100A : 2B	30 – 40 mins	16 hrs	15000	10	15	No data	0.1	1.06
Amsil Eco 20	100A : 2B	20 – 30 mins	16 hrs	20000	20	22	No data	0,1	1.05
Amsil Eco 40	100A : 2B	40 – 50 mins	16 hrs	30000	35	25	No data	0.2	1.05

Please note that the values shown are typical values for your guidance. They are not to be taken as specifications and are subject to certain variability. Please consult the sales specialist for details.

Processing

Pre-mix Part A and Part B separately before measuring out these components, (this mixes any ingredients that may separate during storage). Measure out required amounts of Part A and B into a mixing container and mix thoroughly for 3 minutes making sure to scrape the sides and bottom of the mixing container several times. Transfer mixed material into clean mixing container and stir again. Be careful not to whip and beat the material during the mixing process as this introduces unnecessary air bubbles. For best results after mixing, vacuum de-air material before casting (29 inches of mercury required) and allow for up to 5 x expansion during the vacuum process.

If experiencing a situation where the pot life is too fast, or too slow, the catalyst proportion can be altered to suit using between 1.5 to 3% proportion by weight.

*There are several factors that can influence the **pot life** and **cure time** of tin cure silicones.

Some factors which decrease pot life and cure include:

- Warmer ambient room temperatures (above 23 °C)
- High humidity conditions
- “Aged Material” (as tin cure silicones ages, the pot life typically decreases).
- Different batches of material (if using an old batch of catalyst with a new batch of silicone)
- Higher proportion of catalyst

Some factors which increase pot life and cure time include:

- Cold, dry conditions
- Lower catalyst proportion
- Adding Silicone Thinning Fluid

Mould Performance & Storage

The physical life of the mould depends on how you use it (materials cast, frequency etc.). Casting abrasive materials such as concrete can quickly deteriorate mould detail, while casting non-abrasive materials like wax or plaster will not affect mould detail. Before storing, the mould should be cleaned with soap & water solution and wiped fully dry. Two part (or more) moulds should be assembled. Moulds should be stored on a level surface in a cool, dry environment. Casting Plaster into the mould prior storing will extent mould library life.

For Brush-On applications and for the silicone to hold a vertical surface, Silicone Thixo (Thi-Vex II) should be added to increase viscosity. By weight 0.5% (thick), 1% (thicker), 2% maximum dosage (thickest).

For Block & Cavity moulds (where the silicone is poured) Silicone Thinner can be added to reduce viscosity which assists in reducing air bubbles and capturing intricate surface detail. Max dosage by weight 10%. Please note that by adding Silicone Thinner, Shore A hardness and tear strength are proportionally reduced.

Pouring - for best results, pour the silicone rubber in a thin stream to the lowest part of the mould in a single spot and allow material to flow around the model and self level. It is suggested to cover the model by at least 10 mm.

Curing/Post Curing - allow the mould to cure for 24 hours at room temperature (23°C) before demoulding. Post curing the mould an additional 4-6 hours at 80 °C will eliminate any residual moisture and alcohol that is a by-product of the condensation reaction that can inhibit the cure of some urethane resins and rubbers. Allow mould to cool to room temperature before using. Do not cure rubber where temperature is less than 23°C. The silicone moulds can be cleaned with mild soap and water then rinsed and left to dry.

Disclaimer

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