



# SELECTION GUIDE

## ADDITION/PLATINUM CURE MOULDING SILICONE

NAME	RATIO	POT LIFE	DE-MOULD @ 23°C	SHORE	TEAR STRENGTH	VISCOSITY	CERTIFICATION	COLOUR	THIXOTROPIC
<u>PINKYSIL</u>	100:100 PBV/PBW	6 MINS	20+ MINS	20A	4.5 N/mm	2,500 mPa s		PINK	SIL-THIX
<u>ODDBOD</u>	100:100 PBV/PBW	5-6 MINS	20+ MINS	25A	4 N/mm	BRUSHABLE	SKIN SAFE	PINK	N/A
<u>PINKYSIL PUTTY</u>	100:100 PBV/PBW	2 MINS	8-12+ MINS	25A	20 ppi	PUTTY	SKIN SAFE	PINK	N/A
<u>TRANSIL</u>	100:100 PBV/PBW	8-10 MINS	60-90 MINS	25A	115 pli	5,430 cps		TRANSLUCENT	SIL-THIX
<u>VARIO 15</u>	100:10 PBW	90+ MINS	6+ HOURS	15A	15 N/m	3,000 mPa s	FOOD CONTACT SAFE	TRANSLUCENT	SIL-THIX
<u>VARIO 40</u>	100:10 PBW	90+ MINS	6+ HOURS	40A	15 N/m	10,000 mPa s	FOOD CONTACT SAFE	TRANSLUCENT	SIL-THIX
<u>RTV 3428</u>	100:10 PBW	60 MINS	16 HOURS	28A	20 KN/m	20,000 mPa s		TRANSLUCENT	SIL-THIX
<u>M4601</u>	90:10 PBW	90 MINS	12 HOURS	28A	>30 N/mm	20,000 mPa s	FOOD CONTACT SAFE	SALMON RED	SIL-THIX
<u>M4642</u>	100:10 PBW	90 MINS	12 HOURS	37A	>30 N/mm	15,000 mPa s		DARK RED	SIL-THIX
<u>M4644</u>	100:10 PBW	90 MINS	15 HOURS	40A	>25 N/mm	50,000 mPa s		TRANSLUCENT	SIL-THIX
<u>M4670</u>	100:10 PBW	60 MINS	24 HOURS	55A	>12 N/mm	80,000 mPa s	FOOD CONTACT SAFE	BEIGE	SIL-THIX
<u>PLATSIL 71-40</u>	10:100PBW	90 MINS	24 HOURS	40A	98.6 pli (B)	38,000 cps		TRANSLUCENT	SIL-THIX
<u>PLATSIL 73-60</u>	10:100 PBW	45 MINS	16 HOURS	60A	113 pli (B)	40,000 cps	FOOD CONTACT SAFE	BLUE	SIL-THIX

# SELECTION GUIDE



## ADDITION/PLATINUM PROSTHETIC GRADE SILICONE

NAME	RATIO	POT LIFE	DE-MOULD @ 23°C	SHORE	TEAR STRENGTH	VISCOSITY	CERTIFICATION	COLOUR	THIXOTROPIC
<u>PLATSIL GEL0020</u>	100:100 PBW	40 MINS	120 MINS	00-20	24.8 pli	3,900 cps	SKIN SAFE	MILKY TRANSLUCENT	SIL-THIX
<u>PLATSIL GEL0030</u>	100:100 PBW	45 MINS	240 MINS	00-30	36.6 pli	6,200 cps	SKIN SAFE	MILKY TRANSLUCENT	SIL-THIX
<u>PLATSIL GEL00</u>	100:100 PBW	6 MINS	30 MINS	00-30	56 pli	15,000 cps	SKIN SAFE	MILKY TRANSLUCENT	SIL-THIX
<u>PLATSIL GEL10</u>	100:100 PBW	6 MINS	30 MINS	10A	80 pli	15,000 cps	SKIN & FOOD CONTACT SAFE	MILKY TRANSLUCENT	SIL-THIX
<u>PLATSIL GEL25</u>	100:100 PBW	5 MINS	60 MINS	25A	146 pli	6,000 cps	SKIN & FOOD CONTACT SAFE	MILKY TRANSLUCENT	SIL-THIX

## CONDENSATION/TIN CURE MOULDING SILICONE

NAME	RATIO	POT LIFE	DE-MOULD @ 23°C	SHORE	TEAR STRENGTH	VISCOSITY	CERTIFICATION	COLOUR	THIXOTROPIC
<u>M4503</u>	100:5 PBW	90 MINS	15-20 HOURS	25A	>20 N/MM	40,000 cps	N/A	WHITE	THIXO C
<u>M4470</u>	100:3 & 100:4 PBW	90 MINS @ 3% 80 MINS @ 4%	20-24 HOURS @ 3% 5-6 HOURS @ 4%	60A	>4 N/mm	10,000 mPa s	N/A	RED OXIDE	N/A
<u>TUFSIL</u>	100:2.5 PBW	20 MINS	24 HOURS	28A	2.8 KN/m	30,000 cps	N/A	WHITE	SIL-THIX

PLEASE NOTE THERE MAY BE FURTHER INFORMATION AVAILABLE ON EACH SILICONE PRODUCT PAGE OF OUR WEBSITE, AND OUR SDS & TDS DOCUMENTS. THERE ARE OTHER ANCILLARY PRODUCTS THAT MAY BE USED WITH OUR SILICONE SYSTEMS SUCH AS PIGMENTS, SILICONE DILUENT, FAST CATALYSTS, PRIMERS AND ADHESIVES. PLEASE EMAIL [TECH@BARNES.COM.AU](mailto:TECH@BARNES.COM.AU) FOR CLARITY REGARDING COMPATABILITY.



# WHAT SILICONE SHOULD I USE?

- Do the dimensions need to be very accurate i.e. shrinkage?
- What material will be cast into the mould and how aggressive is it?
- How quickly does the mould need to be ready?
- Will the silicone be poured or brushed on?
- Is good flowability important?
- How hard or soft does the finished mould need to be?
- Will the mould be subject to strong forces i.e. are there any undercuts?
- The design of the mould such as single part block mould, two-part block mould, brush on silicone skin, or matrix mould
- Are there any special requirements e.g. colour, suitable for food contact, heat resistance?

# WHICH TYPE OF SILICONE IS MOST SUITABLE?



## Addition/Platinum Cure Silicones

- Maximum reproduction accuracy & dimensional stability
- Multiple reproductions may be produced
- Fast set times available
- No volatile reaction produced upon cure
- Ready for immediate use
- Compatible with a wide variety of casting materials
- Curing may be disrupted by substances that block the catalyst, also referred to as inhibition
- Available in food contact and skin contact safe formulas

## Condensation/Tin Cure Silicones

- A more cost-effective option for making reproductions
- Low to no risk of inhibition
- Shrinkage of the cured rubber is on average between 0.4 to 0.8%
- Requires approx. 50% relative humidity to cure in conjunction with the catalyst
- Mould may require cleaning, post-curing, and/or sacrificial cast
- Additional & special catalysts available for altering cure times





# THE LIFESPAN OF A SILICONE MOULD



“How many casts will I get?” is something we often get asked. Silicone rubber moulds are capable of producing many reproductions; however, there are variables that will effect the final number. The mechanical properties of the silicone, the mould design, and the casting material are some key factors in the number of casts that may be produced.

- We recommend storing your mould in a cool, dry space, and if possible, cover it from dust and contamination but allow ventilation. You may also need to store your mould upside down and/or add additional support to avoid warping in storage.
- Try to avoid casting different materials into the same mould and let it rest in between casts.
- If your mould needs to be cleaned, avoid aggressive solvents and use warm soapy water, rinse thoroughly and sufficiently air dry.
- Try to design your mould and select a silicone that will avoid stretching the cured silicone as much as possible during de-moulding.
- In some instances, release agents may help protect the mould and delay burnout.
- The casting material you select may fall somewhere on the scale between aggressive to non-aggressive. Epoxides and Polyurethanes would be considered aggressive, through to Waxes and Plasters being considered non-aggressive.