

Data sheet: silicone rubber VTV 800

Description		Low viscosity				
Features		Oil bleed				
Suitable for		Vacuum casting / wax casting				
Cured properties		Tough, excellent release properties				
Colour		Colourless				
Transparency		Transparent				
Catalyst		CAT 740 / 750 / 800	CAT VM20	CAT VM30	CAT VM2*	Test / ISO standard where applicable
Shore hardness	At 23 °C At 60 °C At 80 °C	- 40 A -	- 20 A -	- 30 A -	- 40 A -	-
Tensile strength		5.5 N/mm ²	-	-	-	-
Elongation at break		400 %	900 %	520 %	-	-
Tear strength		15 N/mm ²	-	-	-	-
Coefficient of expansion		2.7 × 10 ⁻⁴ mm/mm/K	2.7 × 10 ⁻⁴ mm/mm/K	2.7 × 10 ⁻⁴ mm/mm/K	2.7 × 10 ⁻⁴ mm/mm/K	-
Processing information						
Viscosity (at 25 °C)	Part A Part B	80000 cPs -	80000 cPs -	80000 cPs -	80000 cPs -	-
Specific gravity (at 25 °C)	Part A Part B	1.10 1.00	1.10 1.00	1.10 1.00	1.10 1.00	-
Mix ratio A:B (by weight)		100:10	100:10	100:10	See below *	-
Curing time	At 25 °C At 40 °C At 60 °C	24 hr 8 hr to 12 hr 3 hr to 6 hr	- 30 hr to 36 hr 10 hr	3 days 15 hr to 20 hr 5 hr to 6 h	See below*	-
Pot life (100 g at 25 °C)		120 min	100 min	100 min	See below*	-
Typical shrinkage		0.1 %	0.1 %	0.1 %	0.1 %	-

CAT VM1 (accelerator)

Curing time and pot life can be halved by adding 1 % VM1 to normal catalyst CAT 750. Add VM1 just before mixing.

*CAT VM2 (long pot life)

Mix	Mix ratio A:B:C (by weight)			Pot life (100 g)			Curing time		
	VTV 800	CAT 800	CAT VM2	At 25 °C	At 40 °C	At 60 °C	At 25 °C	At 40 °C	At 60 °C
1	100	10	0	120 min	26 min	15 min	24 hr	10 hr to 12 hr	3 hr to 6 hr
2	100	7	3	180 min	40 min	20 min	36 hr	20 hr to 25 hr	10 hr to 12 hr
3	100	3	7	280 min	60 min	25 min	48 hr	35 hr to 40 hr	15 hr to 20 hr
4	100	0	10	480 min	90 min	35 min	96 hr	50 hr to 60 hr	25 hr to 30 hr

The information in this data sheet is provided for general guidance only and must not be relied upon as a definitive statement of the product's properties or suitability. Renishaw will not be liable for the consequences of any decision by you to use the product and you must conduct your own testing to determine whether or not the product is suitable for your needs.

Handling procedure

Mixing procedure

- Weigh the silicone and catalyst to the ratio indicated overleaf.
- Combine the two components and blend well, scraping the sides and bottom of the container to ensure that there are no unmixed pockets of material.
- Start the vacuum process to extract all excess air out of the mixed silicone. This usually takes around 10 min to 15 min.
- Ensure that enough volume remains in the container to accommodate the action of the material as the air is extracted from the mix. Silicone rubber may expand up to 7 times its original volume in the process of air extraction under vacuum.
- Pour the mixed material into the mould frame in a slow steady stream and allow to flow freely around and over the model.

Special notes

- It is recommended to use a Renishaw vacuum mixer for this work.
- It is important that a clean dry container and mixing paddle is used to avoid adding dirt or contaminants to the mix.
- If a Renishaw vacuum mixer is not available then the mixed material should be left in the container and placed into a Renishaw vacuum casting machine.

- Cure of the mixed silicone material may be inhibited by amines or products with a high sulfur content such as latex rubber.
- Patch testing is advisable prior to use to avoid inhibition.

Product information

Secondary degassing is recommended once pouring of the mould is completed. This is to eliminate voids around or under the model if air has been trapped while pouring. It is important to ensure that the whole degassing process is carried out well within the working time of the mixed silicone.



Please follow the procedure for preparing the vacuum casting system as described in the system operation manual!



Always observe the instructions in the Safety Data Sheets of the product and always work in accordance with the safety instructions of the materials manufacturer! Safety Data Sheets can be found at www.renishaw.com



Wear suitable respiratory protection, safety gloves and safety goggles during the entire filling procedure in accordance with the Safety Data Sheets.

