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Data sheet: silicone rubber VTV 750

Description			**Medium viscosity, platinum catalysed, RTV-2**			
Features			**Chemical and heat resistant**			
Suitable for			**Vacuum casting / wax casting, pottery cases**			
Cured properties			**High tear strength, rigid**			
Colour			Colourless			
Transparency			Translucent			
Catalyst		**CAT 740 / 750**	**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 -	868
Tensile strength		6.5 N/mm^2	-	-	-	R 527
Elongation at break		350 %	900 %	520 %	-	R 527
Tear strength		17 N/mm^2	-	-	-	34
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	BS 847
Processing information						
Viscosity (at 25 °C)	Part A Part B	90000 cPs -	90000 cPs -	90000 cPs -	90000 cPs -	
Specific gravity (at 25 °C)	Part A Part B	1.09 1.00	1.09 1.00	1.09 1.00	1.09 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 ratio A:B:C (by weight)			Pot life (100 g)			Curing time		
Mix	**VTV 750**	**CAT 750**	**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

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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.

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.

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.

Please follow the correct procedure for use of your vacuum casting system, as set out in its operating instructions.

Always follow the instructions in the Product Safety Data Sheets 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 Product Safety Data Sheets.

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