

HT 33 TRANSPARENT

RTV2 Silicone Rubber for industrial use.

Bicomponent addition silicone indicated for mould making, jewelry, artificial stones, concrete moulding.

1. Main Characteristics

HT 33 is a transparent, pourable addition curing, two component silicone that vulcanize at room temperature. The hardened rubber has excellent long term stability of the mechanical characteristics, durability and guarantees precision in reproduction.

2. Applications

HT 33 is indicated to be used for mould making, jewelry and artificial stones (dimensional stability, precision in reproduction, high mechanical resistance, and durability) and concrete moulding (good compatibility with concrete formulas).

3. Instruction for usage

Take the two bicomponent products supplied by Zhermack (base and catalyst) and shake before use in order to homogenize each component prior to mixing.

Weigh an equal amount of catalyst and base (e.g., 100 grams of catalyst and 100 grams of base; within a 5% error range the results will not change). Once the product is weighted in equal quantities, the base and catalyst must be inserted in a recipient and mixed thoroughly. Make sure the surfaces of the recipient are perfectly clean, free of grease and dry. While mixing, it is important to check that no residue remains on the base and sides of the recipient. Mix energetically until homogeneous. Once the product is thoroughly mixed, it is ready to be casted. It is recommended to pour the silicone from a 30 cm height into the mould.

In the event that the quantity of silicone used is less than what is required, complete the mould by adding the missing quantity of silicone within 24 hours of the hardening of the first layer of silicone. The second layer will attach to the first one without altering the final outcome.

After the ST is complete, the model can be separated from the mould.

4. Important recommendations

- Before handling the product, read the safety data sheet and make sure to get all the information required for safe use.
- The platinum catalyst is contained in the component CATALYST. CATALYST and BASE components may only be used together if they have the same batch number.
- Exact proportions 1:1 must be respected to guarantee the final characteristics of the product.
- Vaseline Oil could inhibit the product vulcanization. Make a small test first.
- It is recommended to use vacuum to eliminate any air bubbles.

- If necessary, use compressed air to facilitate separation of model and mould. Do not use any tools to force the separation of the model from the mould.
- The working time and setting time are reduced if the temperature exceeds 23°C (e.g., if the temperature is 40°C, the working time and setting time are approximately cut in half). If the temperature is less than 23°C, the working time and setting time increase considerably.
- Close the bottles after use, do not invert the caps or lids between the base and catalyst.

5. Physical and Chemical Characteristics

The figures provided are only intended as a guide and should not be used in preparing specifications.

Component CATALYST (uncured)

Properties	Specifications	Analytical Method
Color	Translucent	Visual
Density (Metric system, 23°C/ 73°F)	1,09 g/cc	
Density (USA system, 23°C/73°F)	68,05 lb/ft ³	

Component BASE (uncured)

Properties	Specifications	Analytical Method
Color	Translucent	Visual
Density (Metric system, 23°C/ 73°F)	1,09 g/cc	
Density (USA system, 23°C/73°F)	68,05 lb/ft ³	

Base + Catalyst (cured components) *

Properties	Specifications	Analytical Method
Color	Translucent	
Viscosity of pre-catalyzation mixture	7500 cP	Internal Method (Brookfield)
Mixing Ratio	1:1	n.a.
Density (Metric system, 23°C/ 73°F)	1,09 g/cc	
Density (USA system, 23°C/73°F)	68,05 lb/ft ³	
Working time/Pot life (23°C/ 73°F) **	20'	Internal Method (Brookfield)
Setting time (23°C/ 73°F) ***	210 min	
Shore A hardness (after 24 hours, 23°C)	33 shA	ASTM D2240
Tensile Strength (Metric System, 23°)	5 N/mm ²	ASTM D412
Tensile Strength (USA System, 23°)	870 psi	ASTM D412

Elongation at break (23°)	460 %	ASTM D412
Tear strength Die B (Metric System, 23°)	20 N/mm	ASTM D624
Tear Die B (USA System, 23°)	113 ppi	ASTM D624

* Vulcanizate after 24 H at 23°C.

**The working time “WT”, also known as “pot life”, is the recommended time period for mixing/vacuuming prior to casting. The reported WT shown in the table refers to a standard temperature of 23°C.

***The setting time “ST” is the time necessary for the silicone to harden from the beginning of mixing of the two components. The reported ST shown in the table refers to a standard temperature of 23°C.

Cured Silicone properties are guaranteed within temperatures ranging from a minimum temperature of - 40 °C to a maximum temperature of +200°C.

6. Packaging

Item code (Internal Zhermack code)	Packaging
DT23171	1 kg + 1 kg
DT23172	5 kg + 5 kg
DT23173	25 kg + 25 kg
DT23174	200 kg + 200 kg

7. Shelf life and storage conditions

The “Best use before end” date of each batch is shown on the product label.

18 months if stored correctly at a temperature of between 5° - 27°C (41° - 80°F).

8. Notes

The advices provided as oral or written recommendations or through product use demonstrations are based on the Company knowledge.

Use and application of the product by the user are not subjected to Company’s monitoring or restrictions, therefore the final responsibility falls on the user.

Storage beyond the date specified on the label does not necessary mean that the product is no longer usable. In this case, however, the properties required for the intended use must be checked out for quality assurance reasons. Please contact your Sales Area Manager for support.

9. References

n.a.