

## ***TRASPARENT XTX 45: technical data sheet***

### **1. Description and Main Features**

TRANSPARENT XTX 45 is a bicomponent (base and catalyst) addition RTV silicone rubber that vulcanizes at room temperature.

The main properties of the vulcanized product are its:

- High chemical resistance to the aggressive components of some types of resin;
  - Extremely high tear strength (this feature guarantees high resistance to wear and tear);
  - High accuracy in reproducing very small details;
  - High dimensional stability in time;
  - Remarkable resistance to high temperatures and aging.
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### **2. Main Fields of Application**

**Transparent moulds** (for its remarkable reproduction accuracy, high dimensional stability and high mechanical strength).

**Rapid Prototyping** (for its remarkable reproduction accuracy, high mechanical strength and the excellent laser incision capability).

**Concrete Moulding**

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### **3. Instructions for use**

Take the two bi-component products supplied by Zhermack (Mixing ratio 10:1). The working time is approximately WT (see table below) from the beginning of the mixing at 23°C. It is advised to vacuum the mixture to prevent air pockets. If the quantity used is less than what is needed to complete the duplication, complete the hardening of the silicone and then proceed with the addition of the remaining silicone needed. The material attaches to the silicone without altering the final result if the casting is done before 24 h after the ST (if the temperature is not upper than 23 C).

The setting time (time the silicone needs to vulcanize) is about ST at 23°C (see table below). After the ST is complete, from the start of the mixing, we can separate the model from the mould. If necessary use compress air to facilitate this separation. It is important not to force this separation with sharp objects that can deform the final stamp. The silicon rubber is compatible with all gypsums, coatings, polyurethane resins and acrylic resins

**Note:** The working time and thus the setting time are reduced if the temperature exceeds 23°C (ex. If the temperature is 40°C, the working time is halved and the setting time is approximately halved). If the temperature is less than 23°C both the working time and setting time increase considerably. (ex. If the temperature is 4°C, the working time doubles and the Setting time increases three times the minutes indicated at 23°C ).

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### **4. Important Recommendations**

The surfaces with which the material enters in contact must be perfectly clean, free of grease and dry.

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## 5. Chemical and Physical Properties

Part A (part 10) [catalyst]	Transparent
Part B (part 1) [base]	Translucent
Viscosity Part A (part 10)	70000 cPs
Viscosity Part B (part 1)	90 cPs
Viscosity of pre-catalyzation mixture	≈ 35000 cPs
Mixing ratio (part A/part B)	10 : 1
Density	1,12 g/cc
Working time (@ 23 C)	≈ 90 min
Setting time (@ 23 C)	≈ 15 ore
Hardness after 24h	43 ± 3 sh”A”
Tear strenght	> 20 N/mm (>20 ppi)
Tensile strenght	7,5 ± 0,5 N/mm <sup>2</sup> (1090 psi)
Elongation at break	400 ± 20%

## 6. Available Packages

Zhermack code	Packages part A	Packages part B
DT21142	200 kg	
DT21145		20 kg
DT21144	20 kg	
DT21143		2 kg
DT21140	5 kg	
DT21141		500 g

## 7. Safety Data Sheets

The safety data sheets are available at Zhermack SpA.

The preparation is not to be considered hazardous in accordance with directive 88/379/CEE and subsequent amendments.

## 8. Shelf Life

The TRANSPARENT XTX 45 is guaranteed for a period of **12 months** if stored correctly at a temperature of between 5° - 27°C (41° - 80°F).

Close the bottles after use, do not invert the caps or lids between the base and catalyst.

### **9. RTV2 poly-addition silicone rubber inhibition**

Be aware that contact with certain material can inhibit the curing of the RTV2 poly-addition silicone rubber.

Common contaminants to be avoided are:

Natural or synthetic rubber vulcanized with sulphur derivatives;

- ❖ Poly-condensation RTV catalysed with metallic salts;
- ❖ PVC stabilizing agents;
- ❖ Amine cured epoxies;
- ❖ Sulphur, Tin and Amines derivatives.

In case of doubt it's recommended to carry out a small test by pouring the mixture onto a small area of the object.

Be also aware of possible cross-contamination; it's highly recommended to use only dedicated gear when processing poly-addition RTVs (including degassing devices).

Ensure that the packaging is hermetically sealed again each time it is used.

### **IMPORTANT OBSERVATIONS**

The advice given verbally, in writing or through demonstrations on the use of the products are based on our knowledge. The use and application of the product by the user lie beyond the control of the company and are therefore the user's own responsibility.