

**POLYconcept**

**pmmacast**

CASTABLE PMMA

**NOT A MEDICAL DEVICE**

**USER MANUAL**

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## MEANING OF SYMBOLS



See instructions for use



Storage Temperature



Avoid humidity and frost



Avoid direct sun light



For professional use only

## TYPICAL MATERIAL PROPERTIES AND CHARACTERISTICS

Chemical description	100 % PMMA (polymetil methacrylate)
Density	1,19 g/cm <sup>3</sup>
Modulus of elasticity	2390 MPa
Vicat softening temperature	102°C / 215°F
Ball indentation hardness	145 MPa

## INTENDED USE

**PMMACAST** is used as an alternative to wax. It is suitable for the manufacturing of models to realise the primary mold in the technique of lost wax casting for manufacturing crowns and bridges made of metal ceramic.

PMMA CAST is useful also for making structural test of the oral cavity before performing milling of final material, Zirconia or other

**Warning! It's not a medical device, it can't be used for frameworks to be placed in the oral cavity.**

## STORAGE

Store the product in its box, protect from direct sunlight, keep far from heat sources and in a dry place, within ranges of temperature (5°C ÷ 40°C).

## ADVANTAGES OF PMMA CAST

- Easy to be milled
- Burns out without residues
- Models realized with PMMA CAST have higher bending strength and higher dimensional precision if compared to wax. They can be used also for long bridges.
- Allow to achieve excellent thicknesses of walls and connectors in order to realise frameworks made of metal ceramic, reducing the adjustment processing.
- In case of repetition of fusion, the time to make the milled model again is short.
- Models realized with Pmma Cast can be tested on the oral cavity

## INSTRUCTIONS FOR USE

PMMACAST is realised with millable Pmma and can be processed with the most common Cad-Cam systems.

## NOTES FOR MILLING

*The following processing data, speed and movement of the tool must be "adjusted" from the dental technicians according to shape and thickness of the prosthesis to be processed.*

PROCEDURE	TOOL	Ø TOOL	ROTATION SPEED RPM	FEED RATE	CUTTING DEPTH	COOLING
<b>ROUGH CUT</b>	Tungsten carbide with 1 flute	Ø 2-2,5 mm 3 mm	18-22000 Rpm	18-22mm/min	0,5 mm	Air or water
<b>FINISHING</b>	Tungsten carbide with 1 flute	Ø 1 mm	15-16000 Rpm	16-17mm/min	0,2 mm	Air

Use tungsten carbide burs with one flute.

The use of tools suitable for working with Zirconia (2 cutting edges), new or not, for the processing of PMMA is not recommended; this may cause overheating of the material.

In order to separate the milled frameworks from the blank, cross-cut carbide burs suitable for cutting acrylic materials must be used.

## SPRUIING

The rules for making sprues depend on the alloy or on the press ceramic used.

Follow technical information of producers of alloys.

## INVESTING

Use a ceramic ring liner. Mix the investment material using vacuum, following manufacturer's instructions for use. Heat the mold conventionally or with a rapid heating system up to 580°C (1076°F), with a holding time of 30 minutes. Then increase the temperature of the mold to the appropriate top temperature, according to the alloy or ceramic used. Follow the manufacturer's instructions for use for the investment material, alloy and/or ceramic used.

## DISPOSAL

Wastes of Pmma cast can be disposed of through the domestic residual waste system.

PMMACAST is insoluble in water, inert and presents no danger of pollution.