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Trade name : **Zircor-Yd** CE certification : **CE 0398**
 Material : ZrO₂ (Tetragonal Polycrystals Zirconium dioxide partially stabilized with Yttrium, Y-TZP)
 Product : Presintered Y-TZP blanks for dental application
 Product shape : Zircor-Yd blanks have different shapes and dimensions
 Medical device : NOT STERILE
 NOT FITTING
 NOT SUBMITTED TO CLINICAL INVESTIGATION

<u>Chemical composition %</u> (according to ISO 13356:1997):		ZrO ₂ < 96	Y ₂ O ₃ > 4	Al ₂ O ₃ < 1	SiO ₂ < 0,02
<u>Technical data</u>	Density <i>presintered</i>	~ 3.1 g/cm ³	Density <i>dense sintered</i>		~ 6.05 g/cm ³
According standards	Flexural breaking strength <i>presintered</i>	~ 55 Mpa	Flexural breaking strength <i>dense sintered</i>		~ 900 Mpa
UNI EN ISO 6872:1999	E-modulus <i>dense sintered</i>	~ 210 Gpa	Vickers hardness HV10 <i>dense sintered</i>		1200
ISO 13356:1997	Open porosity	0 %			

Description

Zircor-Yd is biocompatible blank porously presintered Tetragonal Polycrystals Zirconium dioxide partially stabilized with Yttrium (Y-TZP).

The presintered blanks are manufactured in different sizes and shapes and they can be ground by CAD/CAM and copy milling systems to produce dental prostheses (i.e. single crowns and bridges "metal free") for the front and side areas.

Recommendation for use

Working process

Zircor-Yd blank can be ground with copy milling systems as well as dental CAD/CAM, to produce single crown and bridge frameworks.

During the sintering process the ground structure/framework can not be separated by the sectors, this is the only way in preventing possible distortion. Work pieces spanning larger areas must be well supported.

Prior the dense sintering process, the framework must be air cleaned of any dust left during the grinding phase.

The framework and the sectors milled ~ 25 %* greater in size of the original matrix shrunk to its original size during the dense sintering process using a suitable oven at 1350-1500* °C. *(variable based on the selected blank).

Sintering cycle

The blank must be put in the furnace at room temperature

Heating rate	:	3	°C/minute
Max. temperature	:	1500	°C
Palier Time	:	120	minutes
Cooling rate	:	6	°C/minute (if it can be set by the program)
Open oven at max.	:	250	°C

Fine working

After the dense sintering the ceramic product must be milled with water cooled tools.

Avoid the heating of the ceramic product.

Storage

The material should be stored with a moisture < 95 % at a temperature of 30-80 °C.

Waste disposal

Avoid to waste the product into water bearing stratum and superficial water.

Disposal of waste should be in a landfill and handled in accordance with local or national laws and regulations.

Residual risks (The medical devices supplied by H.T.C. S.r.l. are not presenting any residual risks. The following information is only related to the alveolar dust which can be released during the working processes of the medical device).

- During the working process:
 - remove the aerial dust with appropriate local exhaust ventilation;
 - do not put foods or beverages close to the working desk;
 - after the use clean with accuracy the hands and skin.
 - do not inhale the dust;
 - do not smoke, eat and drink;
- To protect the persons during the working process, use for:
 - hands - protective gloves.
 - eyes - wear protective goggles. In case of dust contact rinse abundantly with water. Consult a doctor.
 - mouth - protective dust mask. In case of ingestion: wash the mouth with accuracy. Consult a doctor.
 - body - wear appropriate light protective clothing.