

# 3:45 Zirconia IFU (Instruction for Use)

**Pre-Shaded Mono Layer      Strength 1100Mpa      Translucency 48%**

<b>Indications</b>	<p>Zubler 3:45 is indicated for use in the construction of custom all ceramic restorations in the anterior and posterior region, including full arches and implant supported full arch constructions.</p> <p>Caution: Prescription required. Federal law restricts sale of this material to dental health professionals.</p>
--------------------	--

<b>Device Description</b>	<p>Zubler 3:45 is a zirconia-based ceramic provided in various shapes such as round and/or square, are for use in the manufacture of dental all ceramic crown substructures and are classified into ISO 6872 Type 2 Class 5.</p> <p>Zubler 3:45 is used in the manufacture of ceramic restorations through a milling process utilizing dental CAD/CAM systems (Computer Aided Design/Computer Aided Milling System). Many different shades are offered to meet the needs of each patients’ tooth color. Various shapes are offered to accommodate various milling machine jigs.</p>
---------------------------	---

<b>Preparation</b>	<ol style="list-style-type: none"> <li>1. Inspect the product for damage, impurities, and/or defects.</li> <li>2. Confirm the exterior shape of the product is appropriate for use.</li> <li>3. Confirm the product is the desired shade, size, and meets all the requirements intended for use.</li> <li>4. Confirm the product meets the prescription requirements</li> </ol>
--------------------	---

<b>Instructions For Use</b>	<ol style="list-style-type: none"> <li>1. Always Install the product into the correct jig of the desired milling equipment.</li> <li>2. When preparing the cam, please be mindful of the shrinkage fracture of the material prior to milling. The shrinkage factor can be found on the disc and/or on the box of the material (<b>Example: The minimum thickness; before sintering, approx. .6mm, after sintering, approx. 0.5mm.</b>)</li> <li>3. Check milling machine burs prior to milling! Then proceed with the milling process.</li> <li>4. After milling, remove the bridge or arch carefully.</li> <li>5. If wet milling or if color liquids are used: Use a drying oven to dry at 250oF for 1 hour, prior to placement in the sintering oven. <b>*If an arch or large structure is wet when placed in the sintering oven it will crack when used with the fast climb rate.*</b></li> <li>6. Place into the sintering oven being mindful of placement and proximity to other work. Always check the sintering schedule prior to sintering. Do not include other types of zirconia or PTCR rings with the sintering cycle.</li> </ol>
-----------------------------	---

## Sintering parameters for approved (verified) ovens

<b>*IMPORTANT*</b>	<ul style="list-style-type: none"> <li>• <b>Wet milled or colored structures (especially arches) should be dried in an oven at 250oF for 1 hour prior to sintering to avoid cracking with high heat rates. Dry zirconia also decreases oxidation in MoSi2 elements. Sintering schedules are provided for the verified ovens listed below using the program slots listed. Verified process parameters include the use of covered speed sintering dishes and sintergranulate (not beads). Support structures are not required (FP3 only) when sintering with Sintergranulate (not sintering beads). Sintering dishes must remain covered throughout sintering until cooled below 100OC. Avoid placing warm sintering bowls on conductive surfaces or near cool or moving air.</b></li> </ul>		
<b>Verified Ovens:</b>	MIHM-VOGT	HT-2/M/Zirkon-120	Program slots 15-20 (Ventilated Cooling Programs)
	MIHM-VOGT	HT-2/M/Zirkon-120	Program slots 15-20 (Ventilated Cooling Programs)
	MIHM-VOGT	HT-SPEED	Program slots 23-24 (Ventilated Cooling Programs)
	MIHM-VOGT	HTS-SPEED	All Program Slots
	ZUBLER	VARIO S400	All Program Slots - NOTE*(Door opening temperature max 400°C)
	ZUBLER	VARIO S430	All Program Slots - NOTE*(Door opening temperature max 400°C)
<p>Times and temperatures may differ slightly for other ovens with other media and may require some testing prior to production usage. Contact Zubler USA for more information.</p>			

# 3:45 Zirconia IFU (Instruction for Use Continued)

<b>Full Arch Program - FP3</b>	Important! *Tray must remain covered throughout the sintering process with a speed capable lid or second speed tray. *				
	Stage	Stage Temperatures	Heat/Cool Rate	Hold (Target) Temperature	Holding Time
	S1	Room Temp. to 750°C	70°C/Min.	750°C	0
	S2	750°C to 1530°C	23°C/Min.	1530°C	120
	S3	1530°C to 1300°C	30°C/Min.	1300°C	0
	S4	1300°C to 1000°C	70°C/Min.	1000°C	0
S5	1000°C to Room Temp.	*Cool covered (with lid or second bowl) until below 100°C or to room temperature*			

<b>Full Arch Program- FP1</b>	*You must mill and sinter with support*		*No Cover is necessary for single units *		
	Stage	Stage Temperatures	Heat/Cool Rate	Hold (Target) Temperature	Holding Time
	S1	Room Temp. to 1000°C	17°C/Min.	1 hour	-
	S2	1000°C to 1300°C	10°C/Min.	30 min	-
	S3	1300°C to 1530°C	7°C/Min.	30 min	-
	S4	1530°C	-	2 hours	120°C
S5	1530°C to Room Temp	7°C/Min.	4 hours	-	

<b>Single Unit Program</b>	Important! *Tray must remain covered throughout the sintering process with a speed capable lid or second speed tray. *				
	Stage	Stage Temperatures	Heat/Cool Rate	Hold (Target) Temperature	Holding Time
	S1	Room Temp - 1000°C	99°C/Min.	1000°C	0
	S2	1000°C - 1300°C	50°C/Min.	1300°C	0
	S3	1300°C - 1530°C	30°C/Min.	1530°C	60
	S4	1530°C to 1000°C	99°C/Min.	1000°C	0
S5	1000°C - Room Temp	*Allow to cool open until safe to the touch or to room temperature*			

<b>Notes</b>	<p style="color: red;">Avoid placing warm sintering bowls on conductive surfaces (like granite, marble, stainless steel) or near cool or moving air (fans, air conditioning vents or open windows, etc.) Do not apply pressure while adjusting the sintered body. For layering ceramic on 3:45, use a build-up powder for zirconia. Follow manufacturer recommendations. Zubler USA does not recommend zirconia support/stabilizer be designed or milled for use with 3:45 unless milling FP3, during the recommended sintering process that includes the use of sintergranulate.</p>
--------------	---

<b>Cautions</b>	<p>A. Users are advised to inform themselves, their staff, and those entering their premises of the possible hazards involved with zirconia materials.</p> <p>B. Users are advised to read these instructions and maintain proper, storage, handling, and usage procedures to avoid injury and/or product failure.</p> <p>C. Do not allow contact with children and/or seniors, before delivery to the dentist for placement.</p> <p>D. Do not place 3:45 near an infection.</p> <p>E. Avoid the application of pressure or impact while handling or during transport.</p> <p>F. For use only by licensed dental professionals, dentists, or specialists.</p> <p>G. It is recommended to follow the suggested firing parameters</p>
-----------------	---

<b>Storage</b>	<p>A. Avoid high temperature, humidity, and direct sunlight.</p> <p>B. Store at normal room temperature in a cool dry place.</p>
----------------	--

<b>Transport</b>	<p>A. Transport with sufficient cushioning to avoid impacts.</p> <p>B. Do not drop or throw.</p> <p>C. Avoid the application pressure or impact while handling or during transport.</p>
------------------	---

<b>Disposal</b>	<p>A. The product is disposable and must not be reused.</p>
-----------------	---