



# VITA OMEGA 900

METAL CERAMICS



Directions for use

Date of issue: 11/03



VITA SYSTEM

3D-MASTER®

# VITA



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METAL CERAMICS

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## VITA OMEGA 900, The new fine-particle ceramic

The starting point for the development of VITA OMEGA 900 was the challenge to develop a metal ceramic system that avoids distortion on bio alloys and thus takes the heat resistance of the yellow, high-gold content alloys into account. This ceramic should also be universally suitable for the other alloy types such as reduced gold content bonding alloys, palladium-based alloys and non-precious metal alloys.

By means of modification of the manufacturing process VITA OMEGA 900 demonstrates a fine-particle structure which has an extremely positive effect on the physical properties and considerably improves the processing by the dental technician, e.g. when grinding and polishing. The decisive factor is that it still applies that, compared to traditional ceramics, the low firing temperature of 900 °C was achieved not only for the dentine firing processes but also first and foremost for the opaque firing procedures.

The term fine-particle ceramic does not describe a more finely ground ceramic powder but the particularly homogeneous distribution of glass, sinter and crystal phase in the structure of VITA Omega 900, compared to conventional metal ceramics.

### Homogeneous distribution

Compared to conventional metal ceramics the number of tension cracks is considerably reduced due to the more homogeneous distribution in the structure.

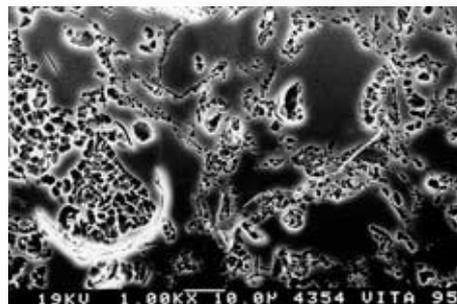


Figure 1:  
**SEM micrograph of conventional  
metal ceramic (magnification x 1000)**

The micrograph shows that leucite crystals are arranged in clusters with a diameter of approx. 30  $\mu\text{m}$ . Tension cracks often form around these due to the great difference between the thermal expansion coefficients of leucite and glass phase.

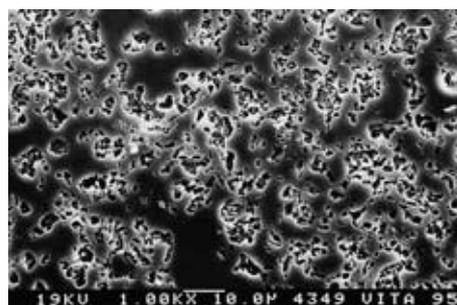


Figure 2:  
**SEM micrograph of the  
fine-particle ceramic OMEGA 900  
(magnification x 1000)**

The polished surface of OMEGA 900 shows that the leucite crystals of approx. 3  $\mu\text{m}$  in diameter have a finely dispersed distribution. Tension cracks are avoided due to the homogeneous distribution.

## Improved physical values

The considerable improvement of the physical values with regard to bending strength, resistance to acids, bond (figure 3) and thermal shock behaviour (figure 4) can also be attributed to the fine structure of the material.

Thanks to the homogeneous, dense surface, OMEGA 900 features excellent grinding and polishing properties

Kind to opposing teeth

An additional advantage: Results of a study of the Dental Center of the University of Zurich indicate that the fine-particle ceramic Omega 900 exhibits a behaviour that is very similar to that of natural tooth enamel and is therefore kind to opposing teeth.

## VITA OMEGA 900 Physical properties

Property	Unit of Measure	Value
CET (25-500°C) opaque	$10^{-6} \times K^{-1}$	14.3 - 14.5
Transformation point opaque	°C	approx. 571
CET (25-500°C) dentine	$10^{-6} \times K^{-1}$	13.4 - 13.9
Softening point - dentine	°C	approx. 655
Transformation point dentine	°C	approx. 584
Solubility - dentine ISO 9693	$\mu\text{g}/\text{cm}^2$	9.8
Density - dentine	$\text{g}/\text{cm}^3$	2.4
Flexural strength - dentine	MPa (Nmm <sup>-2</sup> )	101
Average particle size dentine	$\mu\text{m} (d_{50})$	17.6
Adhesive bond	MPa (Nmm <sup>-2</sup> )	47
Hardness (Vickers) enamel	HV <sub>10</sub>	420
hardness (Vickers) natural enamel	HV <sub>10</sub>	400-500

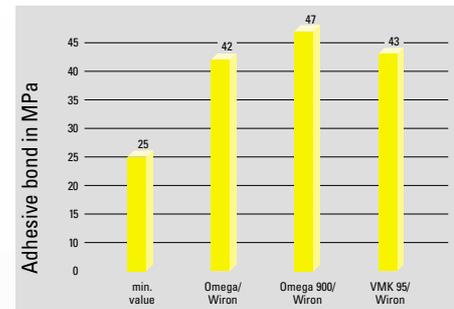


Figure 3: Adhesive bond

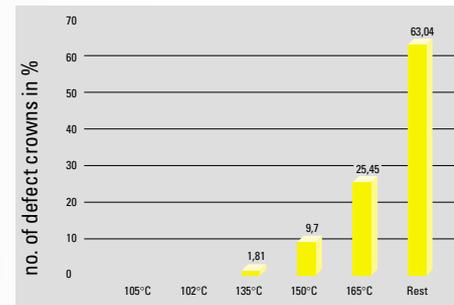


Figure 4: Thermal shock behaviour

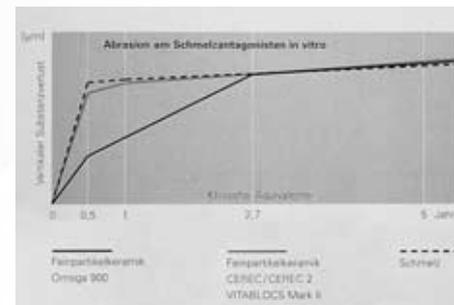
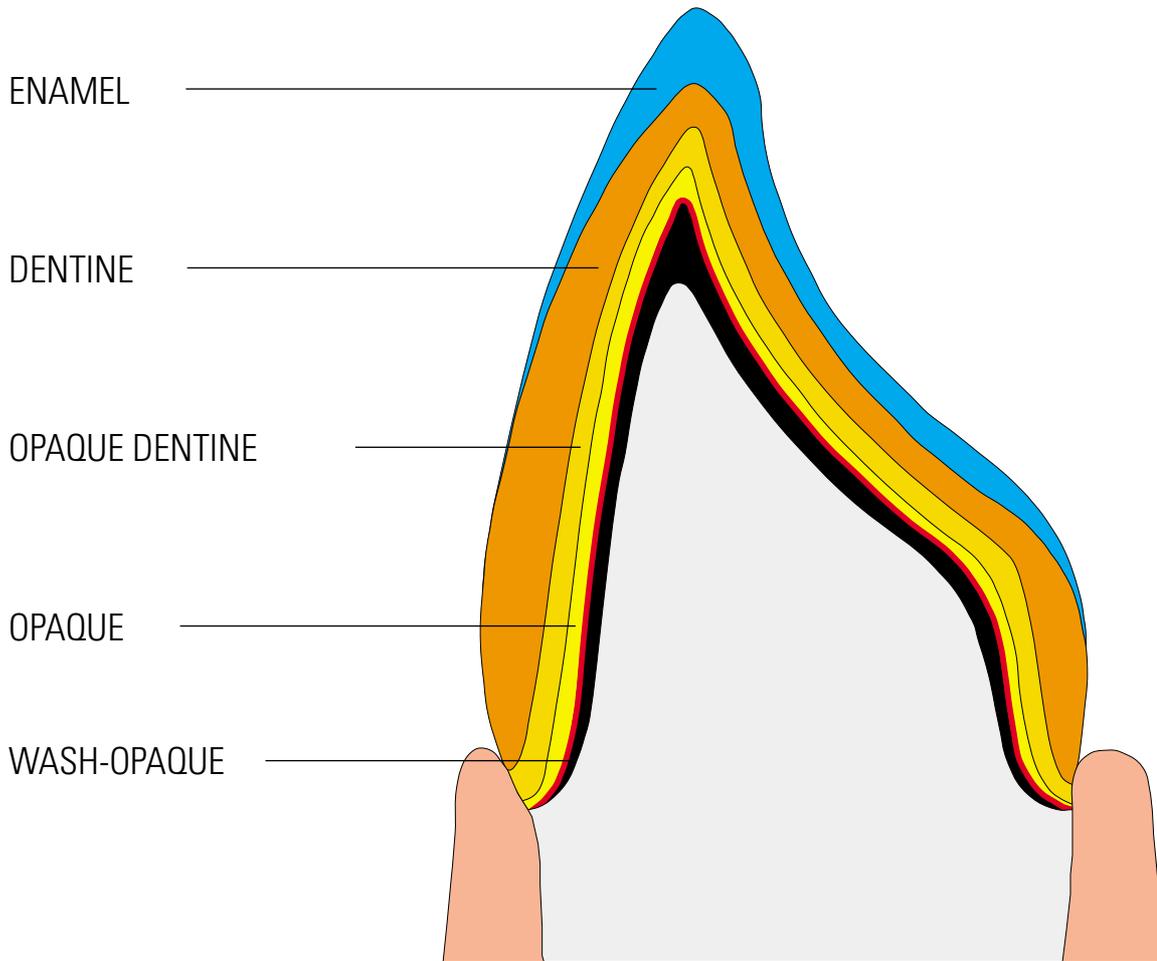


Figure 5: Abrasion at opposing enamel in vitro

The values given here with regard to the technical and physical properties refer to samples produced at VITA and VITA in-house measuring equipment.

# Standard layering of VITA OMEGA 900 METAL CERAMIC



## Information on framework design

In order to produce crowns that are to be veneered with porcelain or pontics, reduced-size anatomical forms must be modelled. The wall thickness of the framework must not be less than 0.4 mm to ensure that the minimum thickness of the metal framework amounts to 0.3 - 0.35 mm after finishing. When modelling, sharp edges, undercuts and deep grooves must be avoided. Every effort should be made to achieve smooth transition zones. Sufficiently stable modelling of the approximal connections must be ensured. For extra stability (especially for large-span bridges) the palatal side of the pontics should be waxed-up with a thin metal collar or at least with inlay-like proximal reinforcements.

The directions of the manufacturer of the alloy with regard to waxing-up, investing, casting, finishing, sandblasting and oxidation must be observed.

## Standard layering

### 1. Application of wash porcelains



- The metal coping, finished according to manufacturer's instructions with a fine cross-cut tungsten carbide burr before sandblasting.  
Sandblasting: 125 µm at a pressure of 2 bar



- The coping after oxidation at 900 °C.  
Acid treatment is no longer required.  
Please follow manufacturer's instructions.



- Applying the wash opaque powder (WO) for the 1st opaque firing.



- Alternatively:  
Applying the wash opaque powder (WO) using the SPRAY-ON technique.

**Note:**

The wash opaque should be applied or sprayed on thinly.



- Alternatively:  
Applying PASTE WASH OPAQUE.  
The paste must be brushed on thinly.

Recommended firing cycle	Preh. Temp. °C	→ min.	↗ min.	↖ °C/min.	Temp. approx. °C	→ min.	VAC min.
Oxidation firing	Follow manufacturer's instructions!						
Wash opaque firing (powder)	600	2.00	4.00	75	900	2.00	4.00
Wash opaque firing (paste)	500	6.00	6.00	67	900	3.00	6.00

The given values are to be seen only as a guideline for the use. Should the surface characteristics, transparency or the degree of lustre not correspond to the result expected under optimum conditions, the firing cycle should be adjusted accordingly.  
The decisive factor for the firing cycle is not the firing temperature displayed by the furnace, but the appearance and the surface characteristics of the object after firing.

- The wash opaque after firing.



## 2. Application of opaque porcelains

- Opaque applied to fully cover the surface  
(in this case with paste opaque)

### Note:

Pastes should be stirred before use with a glass or plastic instrument. If after an extended storage period it is no longer possible to stir the OMEGA 900 PASTE OPAQUE, it can be restored to its original consistency by adding a specific amount of PASTE OPAQUE LIQUID.



Recommended firing cycle	Preh. Temp. °C	→ min.	↗ min.	↖ °C/min.	Temp. approx. °C	→ min.	VAC min.
Opaque firing (powder)	600	2.00	4.00	75	900	1.00	4.00
Opaque firing (paste)	500	6.00	6.00	67	900	2.00	6.00

The given values are to be seen only as a guideline for the use. Should the surface characteristics, transparency or the degree of lustre not correspond to the result expected under optimum conditions, the firing cycle should be adjusted accordingly.  
The decisive factor for the firing cycle is not the firing temperature displayed by the furnace, but the appearance and the surface characteristics of the object after firing.

- Paste opaque after firing.



### 3. Dentine layering



- Applying the opaque dentine thinly, completely covering the labial surface



- Completed opaque dentine build-up.



- Dentine is first built up to the full tooth form...



- ... and then reduced in the incisal third to accommodate the enamel.



- Applying the enamel.



- After completing enamel build-up. To compensate for firing shrinkage, the porcelain should be built up slightly larger than the desired tooth size.

Recommended firing cycle	Preh. Temp. °C	→ min.	↗ min.	↖ °C/min.	Temp. approx. °C	→ min.	VAC min.
Dentine firing	600	6.00	6.00	50	900	1.00	6.00

The given values are to be seen only as a guideline for the use. Should the surface characteristics, transparency or the degree of lustre not correspond to the result expected under optimum conditions, the firing cycle should be adjusted accordingly. The decisive factor for the firing cycle is not the firing temperature displayed by the furnace, but the appearance and the surface characteristics of the object after firing.



- The finished crown before glazing. Characterizations can now be added using VITA Akzent stains.

Recommended firing cycle	Preh. Temp. °C	→ min.	↗ min.	↖ °C/min.	Temp. approx. °C	→ min.	VAC min.
Glaze firing with glaze Akz 25	600	4.00	4.00	75	900	1.00	–

The given values are to be seen only as a guideline for the use. Should the surface characteristics, transparency or the degree of lustre not correspond to the result expected under optimum conditions, the firing cycle should be adjusted accordingly. The decisive factor for the firing cycle is not the firing temperature displayed by the furnace, but the appearance and the surface characteristics of the object after firing.



- The finished restoration on the model after glazing.

# Firing Chart VITA OMEGA 900

Recommended firing cycle	Preh. Temp. °C	→ min.	↗ min.	↗ °C/min.	Temp. approx. °C	→ min.	VAC min.
Oxidation	Please follow manufacturer's instructions						
Wash opaque firing (powder)	600	2.00	4.00	75	900	2.00	4.00
Wash opaque firing (paste)	500	6.00	6.00	67	900	3.00	6.00
Opaque firing (powder)	600	2.00	4.00	75	900	1.00	4.00
Opaque firing (paste)	500	6.00	6.00	67	900	2.00	6.00
Shoulder porcelain firing with MARGIN	600	6.00	6.00	50	900	2.00	6.00
Dentine firing	600	6.00	6.00	50	900	1.00	6.00
1st corrective firing	600	6.00	6.00	48	890	1.00	6.00
Correction firing with COR	600	4.00	6.00	33	800	1.00	6.00
Glaze firing with glaze Akz 25	600	4.00	4.00	75	900	1.00	—
Glaze firing	600	—	4.00	75	900	2.00	—
Glaze firing with Akzent fluid	600	4.00	4.00	75	900	2.00	—

The firing result of dental ceramics depends to a great extent on the individual firing cycle of the user, i.e. on the type of furnace, the position of the temperature sensor, the firing tray as well as the size of the object to be fired. Our recommendations for the firing temperatures (irrespective of whether these are given orally, in writing or by means of partial instruction) are based on our own numerous experiences and tests. Nevertheless, the values indicated here can only be seen as a guideline for the user. Should the surface characteristics, transparency or the degree of lustre not correspond to the result expected under optimum conditions, the firing cycle should be adjusted accordingly. The decisive factor for the firing cycle is not the firing temperature displayed by the furnace, but the appearance and surface quality of the object after firing.

To obtain an optimum metal/ceramic bond the ceramic should be under slight compressive strain. A good result depends also on the size of the workpiece, the type, hardness and heat conducting properties of the alloy used, and particularly in the way each individual technician carries out the firing. Our practical experience has shown that good results can be achieved when the thermal expansion coefficient of the alloy – measured between 25 °C and 600 °C – lies in the range of  $14,0 - 14,4 \times 10^{-6} \text{K}^{-1}$  and that of the VITA OMEGA 900 Metal Ceramics – measured between 25 °C and 500 °C – in the range of  $13,4 - 13,9 \times 10^{-6} \text{K}^{-1}$ . With higher thermal expansion coefficients of the alloy slow cooling is required from the 1<sup>st</sup> dentine firing onwards as the cooling period from 900 °C - 700 °C should not take less than 3 minutes.

## Individual layering technique



- Opaque applied with individual shading in the cervical and incisal area with CO 8 and CO 4.



- Opaque after firing.



- MARGIN applied to the shoulder.  
MAR 3 was used here.

Recommended firing cycle	Preh. Temp. °C	→ min.	↗ min.	↘ °C/min.	Temp. approx. °C	→ min.	VAC min.
Shoulder porcelain firing with MARGIN	600	6.00	6.00	50	900	2.00	6.00

The given values are to be seen only as a guideline for the use. Should the surface characteristics, transparency or the degree of lustre not correspond to the result expected under optimum conditions, the firing cycle should be adjusted accordingly.

The decisive factor for the firing cycle is not the firing temperature displayed by the furnace, but the appearance and the surface characteristics of the object after firing.



- Shoulder after firing.



- Applying the opaque dentine, which was here enhanced with LUMINARIES – LM4 in the cervical area and LM1 in the body...



- ... and NUANCE powder NU8 in the incisal area. Completed build-up with opaque dentine.



- Applying the dentine with a lightened zone, e.g. dentine B1 or 1M1.



- Completed dentine build-up of a crown.



- Dentine reduced to accommodate the NUANCE and TRANSLUCENT porcelains.



- Before the NUANCE porcelains are used, a thin translucent layer (T1 and T5) is applied...



- ... into which the NUANCE porcelains are then washed (NU1, NU4 and NU8).

Recommended firing cycle	Preh. Temp. °C	→ min.	↗ min.	↖ °C/min.	Temp. approx. °C	→ min.	VAC min.
Dentine firing	600	6.00	6.00	50	900	1.00	6.00

The given values are to be seen only as a guideline for the use. Should the surface characteristics, transparency or the degree of lustre not correspond to the result expected under optimum conditions, the firing cycle should be adjusted accordingly.

The decisive factor for the firing cycle is not the firing temperature displayed by the furnace, but the appearance and the surface characteristics of the object after firing.



- Intermediate firing as visual control of the NU and T porcelains.



- The surface should be ground before the final tooth form is modelled by adding cervical, translucent and enamel porcelains.



- Crown before the 2nd dentine firing.

Recommended firing cycle	Preh. Temp. °C	→ min.	↗ min.	↘ °C/min.	Temp. approx. °C	→ min.	VAC min.
Dentine firing	600	6.00	6.00	50	900	1.00	6.00

The given values are to be seen only as a guideline for the use. Should the surface characteristics, transparency or the degree of lustre not correspond to the result expected under optimum conditions, the firing cycle should be adjusted accordingly. The decisive factor for the firing cycle is not the firing temperature displayed by the furnace, but the appearance and the surface characteristics of the object after firing.



- Crown after finishing, prepared for glaze firing.

Recommended firing cycle	Preh. Temp. °C	→ min.	↗ min.	↘ °C/min.	Temp. approx. °C	→ min.	VAC min.
Glaze firing	600	–	4.00	75	900	2.00	–
Glaze firing with Akzent fluid	600	4.00	4.00	75	900	2.00	–

The given values are to be seen only as a guideline for the use. Should the surface characteristics, transparency or the degree of lustre not correspond to the result expected under optimum conditions, the firing cycle should be adjusted accordingly. The decisive factor for the firing cycle is not the firing temperature displayed by the furnace, but the appearance and the surface characteristics of the object after firing.



- The finished restoration after glaze firing.

# T r o u b l e

## Trouble Shooting



**Important:**  
When sprayed on, the opaque must not be too dry.



Recommended firing parameters must not be changed.



The porcelain consistency is too watery.



Porcelain too dry when stirred.



Optimal consistency of the porcelain.



Due to applying material that is too watery, the layers "merge" with each other.



Build-up of porcelains too dry.



Optimum consistency ensures simple building up of layers.



Insufficient quality of surface does not feature resistance to plaque in the oral environment. Layers that are too wet and reduced drying time result in large cracks of the porcelain surface.



Perfect firing result.

# Shooting



## **Furnace:**

Thorough testing of the ceramic furnace represents the most important precondition to successful firing on of VITA OMEGA 900.

## **Preconditions:**

considerable amount of oxide deposits may cause weakening of the bond and discolouration of the porcelain (discolourations of the fireclay base)  
furnaces featuring large temperature fluctuations are not suitable  
damaged fireclay bases as well as contaminated furnace linings must be exchanged before firing

The working parameters of the manufacturer described should be completed by the routine and the experience of the dental technician. Temperature fluctuations of +/- 10 °C can already be recognized clearly and are decisive factors for success or failure. The evaluation of the surface lustre (texture of an egg shell) is the only reliable and safe method to ensure correct firing.



A slight lustre (egg shell) of the porcelain surface confirms correct firing. If the porcelain appears to be milky and not homogeneous, the temperature is too low. Use steps of 10 °C to approach the correct firing temperature.

## VITA OMEGA 900 METAL CERAMICS

Problem	Cause	Elimination
<p><b>Opaque</b></p> <p>Formation of cracks in the paste opaque</p>	<p>Paste opaque was applied too thickly.</p> <p>Organic substances in the paste opaque burnt out too rapidly.</p>	<p>First apply wash opaque and fire, then apply again until opaque layer covers the object entirely.</p> <p>Extend predrying time.</p>
<p>Formation of cracks in the OPAQUE</p>	<p>OPAQUE was applied too thickly or runs in recesses, e.g. fissures, collars</p> <p>Opaque dried too quickly</p>	<p>Apply more thinly and evenly; do not vibrate too strongly.</p> <p>Adjust predrying times and predrying temperature in accordance with firing chart</p>
<p>Formation of bubbles in the OPAQUE</p>	<ul style="list-style-type: none"> <li>- Faulty casting</li> <li>- incorrect sandblasting</li> <li>- Contaminated metal surface</li> <li>- Sintering of Al<sub>2</sub>O<sub>3</sub> in the metal surface</li> </ul>	<ul style="list-style-type: none"> <li>- See working instructions of the manufacturer of the metal</li> <li>- Follow manufacturer's instructions or use suitable type of alloy</li> <li>- Thorough cleaning of the metal surface</li> <li>- Reduction of blasting pressure</li> </ul>
<p><b>Layering</b></p> <p>Surface reveals tear-ups</p>	<ul style="list-style-type: none"> <li>- Layers were built up too dry</li> </ul>	<ol style="list-style-type: none"> <li>1. Layers need more moisture, do not blot or condense.</li> <li>2. If required, use VITA SPECIAL MODELLING FLUID</li> <li>3. Lower predrying temperature to 500 °C.</li> </ol>
<p>Onion skin-like chippings after 2nd dentine firing</p>	<ul style="list-style-type: none"> <li>- Layers were built up too dry</li> <li>- Surface not ground prior to 2nd dentine firing</li> </ul>	<p>see above</p> <ul style="list-style-type: none"> <li>- grind surface with stones or diamond-coated instruments or sandblast carefully</li> </ul>
<p>Microporosities in the surface</p>	<ul style="list-style-type: none"> <li>- Layers were built up too dry</li> <li>- extraction too powerful</li> </ul>	<ul style="list-style-type: none"> <li>- Wet the ceramic and place it onto the firing tray when wet</li> </ul>
<p>Cracks</p>	<ul style="list-style-type: none"> <li>- TEC was not adhered to</li> <li>- Incorrect design of framework</li> </ul>	<ul style="list-style-type: none"> <li>- Cool down slowly from TEC 25-600 °C ≥ 14.5</li> <li>- see framework guide 908 E</li> </ul>
<p>Cracks parallel to the tooth axle</p>	<ul style="list-style-type: none"> <li>- Insufficient separating of the porcelain in the interdental spaces</li> </ul>	<p>Separate down to the opaque Note: Wet the scalpel slightly.</p>

# Shooting

Problem	Cause	Elimination
<b>Layering</b> Lack of translucency / brilliance	<ol style="list-style-type: none"> <li>Excessive condensing</li> <li>Error in the vacuum system</li> <li>Firing temperature too low (incorrect)</li> <li>Predrying and/or heating time too short</li> <li>Use of oily modelling liquids</li> <li>Too much enamel</li> </ol>	<ol style="list-style-type: none"> <li>Do not condense or condense only slightly.</li> <li>Test of vacuum pump</li> <li>Temperature check with silver sample</li> <li>Adhere to firing instructions</li> <li>Use original VITA liquids</li> <li>Adhere to recommended layering technique</li> </ol>
Core shines through	<ol style="list-style-type: none"> <li>OPAQUE DENTINE only applied up to the incisal edge of the metal framework</li> <li>OPAQUE DENTINE applied too thinly</li> </ol>	<ol style="list-style-type: none"> <li>Extending the cap with OPAQUE DENTINE</li> <li>Apply covering layer of OPAQUE DENTINE across the labial surface</li> </ol>
Shade too pale	<ol style="list-style-type: none"> <li>Insufficient amount of OPAQUE DENTINE applied</li> <li>Firing temperature for porcelain too high or too low</li> </ol>	<ol style="list-style-type: none"> <li>Spread OPAQUE DENTINE across the entire labial surface</li> <li>Temperature check with silver sample</li> </ol>
Shade too "glowing", too intense	WASH OPAQUE applied too richly  Firing temperature for porcelain too high  OPAQUE DENTINE shines through if veneer is too thin	Apply WASH OPAQUE more thinly, see working instructions  Temperature check with silver sample  Mixing ratio OPAQUE DENTINE / DENTINE 50:50, instead of pure OPAQUE DENTINE
Runmarks in the porcelain	Opaque residues in the water for the brush  Water for the brush contaminated	Use fresh water after applying the opaque  Use fresh water
Black dots in the porcelain	<ol style="list-style-type: none"> <li>Residues of protective foil that remained on the bottle</li> <li>Silicone residues of rubber polishers</li> <li>Porcelains became contaminated with metal/grinding dust</li> </ol>	<ol style="list-style-type: none"> <li>Protective foil must always be removed completely</li> <li>Clean carefully</li> <li>Ensure that the "ceramic" working place is clean</li> </ol>
Runmarks after glaze firing	Residues of grinding dust on the surface	Clean object carefully before glaze firing

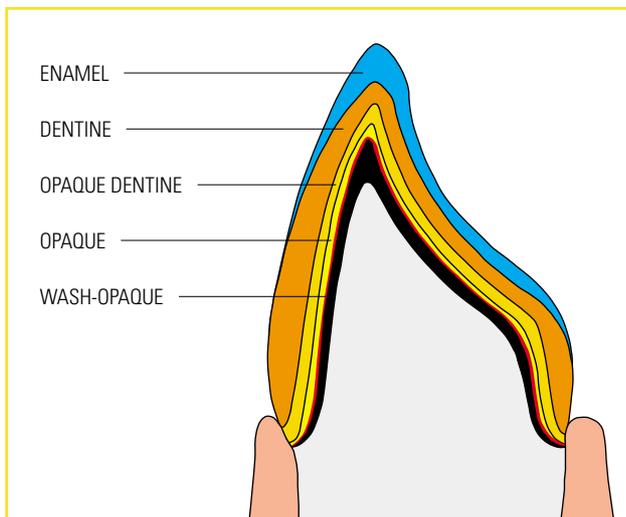
# Accurate shade reproduction in the case of thin wall thicknesses in the VITA SYSTEM 3D-MASTER®

- a high degree of accuracy in the case of thin wall thicknesses
- simple handling thanks to the logical structure according to colorimetric principles
- reduces the no. of repeats since there is an in-depth shading even in the case of thin wall thicknesses
- conditions for shade reproduction even in the case of younger patient (space is often lacking due to tooth substance-saving grinding)
- excellent aesthetics can be achieved even when space is lacking
- simple and safe to use, therefore also suitable for "newcomers" to ceramics
- no mixing of colours necessary – accurate handling
- natural shade effect guaranteed even in the cervical area

## Working procedure:

In the case of very thin wall thicknesses or thinly tapering marginal areas there may not be sufficient space for accurate shade reproduction on account of the natural looking translucency of the VITA OMEGA 900 metal ceramic materials. The colorimetric structure principle of the VITA SYSTEM 3D-MASTER offers an optimum solution in the case of thin wall thicknesses thanks to its wide variety of possibilities with regard to colour saturation (chroma). By using the VITA OMEGA 900 OPAQUE DENTINE of the next highest degree of colour saturation the chroma of the selected shade can be increased. This does not alter the lightness and hue of the chosen shade.

### Standard layering technique



**Example: 3M3** in the case of a thin wall thickness

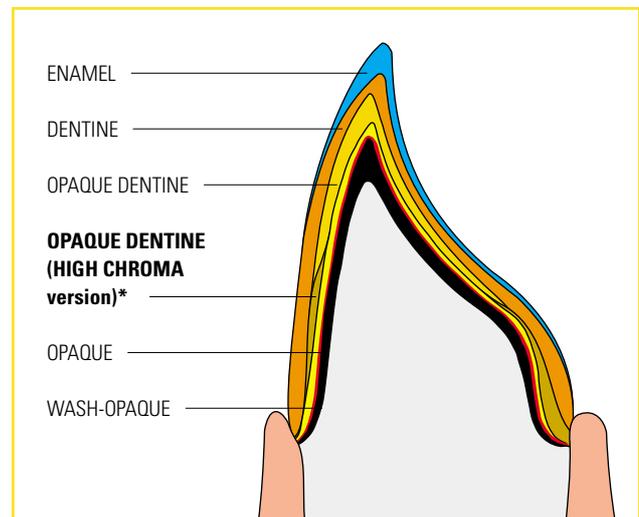
**Instead of the standard layering technique:**

OPAQUE 3M3 - OPAQUE DENTINE 3M3 -  
DENTINE 3M3 - ENAMEL EN2

**Now HIGH CHROMA layering technique:**

OPAQUE 3M3 - **OPAQUE DENTINE 3M4** -  
DENTINE 3M3 - ENAMEL EN2

### HIGH CHROMA layering technique



\* The build-up can be individually designed according to the desired chroma.

**In order to close the gap when selecting the highest degree of colour saturation (e.g. 3M3), 11 new additional VITA OMEGA 900 OPAQUE DENTINE with a higher chroma are available:**

**OD1M3 -  
OD2L3.5 - OD2M4 - OD2R3.5 -  
OD3L3.5 - OD3M4 - OD3R3.5 -  
OD4L3.5 - OD4M4 - OD4R3.5 -  
OD5M4 -**

## Determination table for VITA OMEGA 900 ENAMEL VITA SYSTEM 3D-MASTER®

1M1	1M2	2L1.5	2L2.5	2M1	2M2	2M3	2R1.5	2R2.5	3L1.5	3L2.5	3M1	3M2
EN2	EN2	EN2	EN2	EN2	EN2	EN2	EN2	EN2	EN2	EN2	EN2	EN2
3M3	3R1.5	3R2.5	4L1.5	4L2.5	4M1	4M2	4M3	4R1.5	4R2.5	5M1	5M2	5M3
EN2	EN2	EN2	EN4	EN4	EN4	EN4	EN4	EN4	EN4	EN4	EN4	EN4

## VITAPAN classical

A1	A2	A3	A3,5	A4	B1	B2	B3	B4	C1	C2	C3	C4	D2	D3	D4
EN2	EN2	EN2	EN4	EN4	EN1	EN1	EN2	EN2	EN2	EN2	EN2	EN3	EN2	EN4	EN4

## Determination table for VITA OMEGA 900 MARGIN

VITA SYSTEM 3D-MASTER		VITAPAN classical	
1M1	50% MAR 1 + 50% MAR N	A1	MAR 2
1M2	MAR 1	A2	MAR 3
2L1.5	50% MAR 2 + 50% MAR N	A3	MAR 3
2L2.5	MAR 2	A3,5	MAR 4
2M1	50% MAR 2 + 50% MAR N	A4	MAR 5
2M2	MAR 2	B1	MAR 1
2M3	MAR 2	B2	MAR 2
2R1.5	50% MAR 2 + 50% MAR N	B3	MAR 3
2R2.5	MAR 2	B4	MAR 4
3L1.5	50% MAR 3 + 50% MAR N	C1	25% MAR 6 + 75% MAR N
3L2.5	MAR 3	C2	50% MAR 6 + 50% MAR N
3M1	50% MAR 3 + 50% MAR N	C3	MAR 6
3M2	MAR 3	C4	MAR 6
3M3	MAR 3	D2	MAR 4
3R1.5	50% MAR 3 + 50% MAR N	D3	MAR 4
3R2.5	MAR 3	D4	50% MAR 6 + 50% MAR N
4L1.5	50% MAR 4 + 50% MAR N		
4L2.5	MAR 4		
4M1	50% MAR 4 + 50% MAR N		
4M2	MAR 4		
4M3	MAR 4		
4R1.5	50% MAR 4 + 50% MAR N		
4R2.5	MAR 4		
5M1	50% MAR 5 + 50% MAR N		
5M2	MAR 5		
5M3	MAR 5		

# Application of the porcelains from the PROFESSIONAL KIT

## LUMINARY

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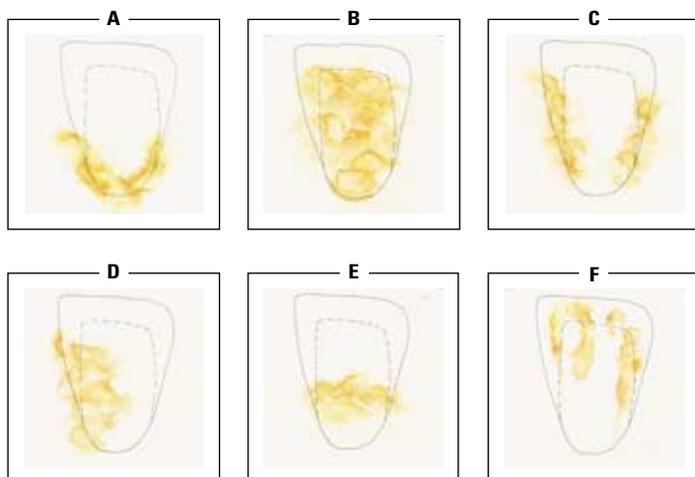
The LUMINARIES can be used to vary the fluorescence of restorations.

If LUMINARIES are used as "shoulder porcelains", the surface must be glazed or polished.

<b>LM 1</b>	moonbeam	(white)	can be mixed with any of the LUMINARIES; it is the most fluorescent porcelain.
<b>LM 2</b>	vanille	(yellow)	
<b>LM 3</b>	sesame	(greenish-yellow)	yellowish tones; recommended for use mainly within the B colours and 2L2.5, 2M2, 2M3, 2R2.5, 3L1.5, 3L2.5.
<b>LM 4</b>	candy	(reddish-yellow)	
<b>LM 5</b>	nugget	(brownish-yellow)	reddish tones; recommended for use mainly within the A colours and 4L2.5, 4M3, 5M3.
<b>LM 6</b>	sand	(beige)	greyish tone; recommended for use mainly within the C colours and 3M2, 3M3, 3R2.5, 4L1.5, 4M2, 4R1.5, 5M2.
<b>LM 7</b>	blush	(brownish-pink)	reddish-brown tone; recommended for use mainly in cases where a stronger red tone is needed in the cervical area.

## Application examples of VITA OMEGA 900 LUMINARIES

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**A** ... applied cervically on anterior crowns and bridges, also in the basal area of the pontic, VITA OMEGA 900 LUMINARIES enhance the light distribution.

**B** ... applied over the entire crown if required, thus providing brilliant and harmonious reproduction of the tooth colour. In certain special cases, opaque dentine can be omitted entirely.

**C / D** ... integrated laterally, they can also serve to intensify light distribution. This allows the degree of brightness to be controlled individually and to prevent undesirable formation of shadowed areas.

**E / F** ... used as "effect powders", the VITA OMEGA 900 LUMINARIES serve to add more vitality to certain areas. They also enhance the brilliance of the VITA OMEGA 900 porcelains.

**Note:** Never apply VITA OMEGA 900 LUMINARIES to the surface.

## OPAL TRANSLUCENT

<b>OT 1</b>	azure	(bluish translucent)
<b>OT 2</b>	rosewood	(reddish translucent)
<b>OT 3</b>	sunlight	(whitish translucent)

are all-purpose opalescent translucent porcelains; they can be layered into the enamel or applied as a final coating to the entire surface of the crown

## CORRECTIVE

<b>COR 1</b>	incisal for small corrections in the enamel area
<b>COR 2</b>	body for small corrections in the body of the tooth
<b>COR 3</b>	translucent for small corrections in the translucent incisal area

## TRANSLUCENT

<b>T 1</b>	milky	for whitish incisal areas, margins and triangular pro- tuberances
<b>T 2</b>	opal	for ridges, wedges and covering the labial surfaces
<b>T 4</b>	clear	neutral-coloured, translucent porcelain
<b>T 5</b>	polar	layered under the enamel to emphasize bluish incisal areas
<b>T 6</b>	blue	for bluish wedges and ridges
<b>T 8</b>	shell	(light reddish-brown) for enamel discolorations for all teeth
<b>T 9</b>	navajo	(reddish, translucent) for enamel discolorations, especially with older teeth

## CERVICAL

These porcelains are layered onto the dentine above the neck of the tooth extending into the approximal areas to increase the illusion of depth.

<b>CE 1</b>	light orange	
<b>CE 2</b>	light yellow	
<b>CE 3</b>	gold	(golden-yellow)

## NUANCE

These porcelains can be layered under, or "washed" into the dentine in order to create natural, in-depth shade effects.

<b>NU 1</b>	flesh	(yellowish-beige)
<b>NU 2</b>	corn silk	(corn-yellow)
<b>NU 3</b>	golden glow	(dark yellow)
<b>NU 4</b>	saffron	(light orange)
<b>NU 5</b>	gold earth	(orange)
<b>NU 6</b>	salmon	(pink)
<b>NU 7</b>	caramel	(brown)
<b>NU 8</b>	brown sugar	(greenish-brown)
<b>NU 9</b>	cloud	(greyish-blue)
<b>NU 10</b>	snow	(white)

## GINGIVA

<b>G 1</b>	light flesh	(light pink)
<b>G 2</b>	dark flesh	(dark pink)

## MARGIN

The MARGIN materials (MAR) were especially developed to create a perfect transition between crown and die in the area of the crown margin in case of labially shortened metal coping. The MARGIN material applied can be hardened by heating.

It is recommended to stabilize the shoulder with a drier or with radiated heat at the furnace opening.

**MAR N** Neutral MARGIN material for mixing MAR 1 - MAR 6

**MAR 1**  
**MAR 2**  
**MAR 3** The colours of the MARGIN materials have been matched with the VITA Toothguide 3D-MASTER® as well as the

**MAR 4** VITAPAN® classical shade guide.

**MAR 5** For determination of MARGIN

**MAR 6** materials see separate table (page 19).

# Presentation

## VITA OMEGA 900 METAL CERAMICS

### VITA SYSTEM 3D-MASTER®

#### VITA OMEGA 900 3D-MASTER STANDARD SET 12

with powder opaque\*



Contents	Material
1 x 12g	WASH OPAQUE
26 x 12g	OPAQUE
26 x 12g	DENTINE
26 x 12g	OPAQUE DENTINE
2 x 12g	ENAMEL EN2
1 x 12g	TRANSLUCENT T4
1 x 12g	WINDOW
1 x 50 ml	OMEGA 900 OPAQUE LIQUID
1 x 50 ml	MODELLING FLUID
1 pack	Firing trays A+B
1 pack	Firing trays G
1	OMEGA 900 3D-MASTER Shade Indicator with 107 laminae
2	VITA Toothguides 3D-MASTER
1	Working instructions

#### VITA OMEGA 900 3D-MASTER STARTER KIT 3M2

with powder opaque\*



Contents	Material
1 x 12g	OPAQUE
1 x 12g	DENTINE
1 x 12g	OPAQUE DENTINE
1 x 12g	ENAMEL EN2
1 x 12g	TRANSLUCENT T4
1 x 12g	WINDOW
1 x 50 ml	OMEGA 900 OPAQUE LIQUID
1 x 50 ml	MODELLING FLUID
1	VITA Toothguide 3D-MASTER
1	Working instructions

\*each also available with PASTE OPAQUE

#### VITA OMEGA 900 3D-MASTER HIGH CHROMA OPAQUE DENTINE SET



Contents	Material
11 x 12g	OPAQUE DENTINE
1	VITA OMEGA 900 3D-MASTER HIGH CHROMA OPAQUE DENTINE Shade Indicator
1	Working instructions



### VITA OMEGA 900 3D-MASTER PASTE OPAQUE SET

Contents	Material
1 x 7g	PASTE WASH OPAQUE
26 x 5g	PASTE OPAQUE
1 x 15ml	PASTE OPAQUE LIQUID
1	Mixing spatula
1	Flat brush
1	Working instructions



### VITA OMEGA 900 PROFESSIONAL KIT°

Contents	aMaterial
6 x 12g	TRANSLUCENT
3 x 12g	OPAL TRANSLUCENT
3 x 12g	CERVICAL
7 x 12g	LUMINARY
2 x 12g	GINGIVA
10 x 9g	NUANCE
3 x 12g	CORRECTIVE
7 x 12g	MARGIN
3	Shade sample blades
1	Working instructions



### VITA OMEGA 900 MARGIN KIT°

Contents	Material
7 x 12g	MARGIN
1	Shade sample blade
1	Working instructions

### VITA OMEGA 900 COLOR OPAQUE°

CO3, CO4, CO6, CO8 are available separately  
in 12g (Powder) and in 5g (Paste)

°can also be used for VITAPAN classical shades



### What advantages does the VITA Toothguide 3D-MASTER offer you?

The VITA Toothguide 3D-MASTER enables you to determine all natural tooth shades accurately and systematically. It is at present the only shade guide available for determining natural tooth shades that is structured according to a colorimetric order principle. It takes into account the three dimensions (3D) of colour perception, namely:

1. Lightness (value)
2. Colour saturation (chroma)
3. Hue

The colour system on which this shade is based allows and a clear and unambiguous shade selection with unparalleled accuracy. It considerably simplifies communication between shade-taker and shade reproducer, which greatly increases the accuracy of shade selection.

# VITAPAN® classical

## VITA OMEGA 900 classical STANDARD SET 12\*

with powder opaque\*\*

Contents	Material
1 x 12g	WASH OPAQUE
16 x 12g	OPAQUE
16 x 12g	DENTINE
16 x 12g	OPAQUE DENTINE
5 x 12g	ENAMEL
1 x 12g	TRANSLUCENT T4
1 x 12g	WINDOW
1 x 50ml	OMEGA 900 OPAQUE LIQUID
1 x 50ml	MODELLING FLUID
1 pack	Firing trays A+B
1 pack	Firing trays G
1	OMEGA 900 classical Shade Indicator with 68 laminae
1	Working instructions

\*also available as VITA OMEGA 900 classical STANDARD SET 50

\*\*also available with PASTE OPAQUE

## VITA OMEGA 900 classical PASTE OPAQUE SET

Contents	Material
1 x 7g	PASTE WASH OPAQUE
16 x 5g	PASTE OPAQUE
1 x 15ml	OPAQUE LIQUID
1	Flat brush
1	Mixing spatula
1	Working instructions

If used as the manufacturer intended, no dangers are known to us for the user of VITA OMEGA 900 OPAQUE LIQUID, VITA MODELLING LIQUID EXTRA, VITA MODELLING FLUID, VITA SPECIAL MODELLING FLUID and VITA PASTE OPAQUE LIQUID. As regards biocompatibility no long-term reactions have been documented in the case of dental ceramics.

VITA OMEGA 900 METAL CERAMIC powders consist of modified feldspar frits and admixtures of low proportions of colour frits melted into the shade-giving metal oxides. If used as the manufacturer intended no dangers are known to us for the user.

## VITA OMEGA 900 classical 6-COLOR-SET°

with PASTE OPAQUE°°

Contents	Material
1 x 7g	PASTE WASH OPAQUE
6 x 5g	PASTE OPAQUE
6 x 12g	DENTINE
6 x 12g	OPAQUE DENTINE
3 x 12g	ENAMEL
4 x 9g	NUANCE NU1, 3, 5, 9
3 x 12g	TRANSLUCENT T1, 4, 5
1 x 12g	OPAL TRANSLUCENT OT2
2 x 12g	CERVICAL CE1, 3
1 x 12g	WINDOW
1 x 15ml	PASTE OPAQUE LIQUID
1 x 50ml	MODELLING FLUID
1	Flat brush
1	Mixing spatula
1	Working instructions

°in the VITAPAN classical shades A2/A3/A3,5/B2/B3 and D3

°°also available with PASTE OPAQUE

In the case of dust formation use an extractor unit or the dust mask P2 (or grind when wet). Protective goggles should be worn when grinding the fired ceramic.



The following products are certified and bear the CE mark

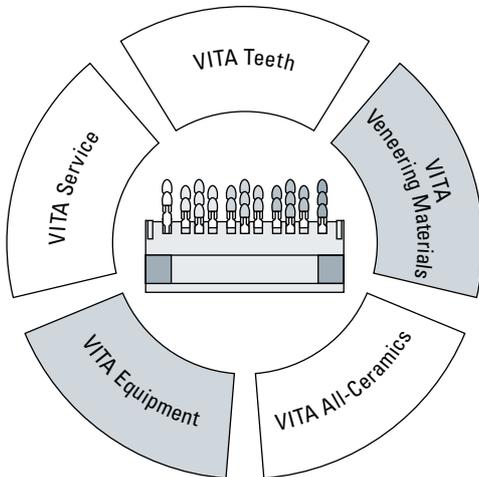
**CE** 0124 :

VITA OMEGA 900 METAL CERAMIC

VITA Akzent



VITA SYSTEM  3D-MASTER®



With the unique VITA SYSTEM 3D-MASTER® all natural tooth shades are systematically determined and completely reproduced.



VITA OMEGA 900 METAL CERAMIC is available in the VITA SYSTEM 3D-MASTER® and VITAPAN® classical system. Shade compatibility is guaranteed with all VITA materials.

**Please note:** Our products should be used according to the working instructions. We cannot be held liable for damages resulting from incorrect handling or usage. The user is furthermore obliged to check the product before use with regard to its suitability for the intended area of applications. We cannot accept any liability if the product is used in conjunction with materials and equipment from other manufacturers which are not compatible or not authorized for use with our product. Furthermore, our liability for the correctness of this information is independent of the legal ground and, in as far as legally permissible, is limited to the invoiced value of the goods supplied excluding turnover tax. In particular, as far as legally permissible, we do not assume any liability for profit loss, for indirect damages, for consequential damages or for claims of third parties against the purchaser. Claims for damages based on fault liability (culpa in contrahendo, breach of contract, unlawful acts, etc.) can only be made in the case of intent or gross negligence. The VITA Module Box is not a compulsory component of the product. Date of issue of these directions for use: 11/03

CE 0124

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