


ANTAGON

interaction

User instructions



Elephant Dental's mission statement.

Our aim is to make a positive contribution to the society through the development, manufacture and distribution of innovative, high quality product systems that are guaranteed to facilitate the work of dental professionals and increase patient satisfaction.

Elephant

dental health products

Indication:

Antagon Interaction is the normally expanding, high melting dental ceramic for traditional alloys. Antagon Interaction can be easliy fired on sub-structures with a thermal expansion coefficient between 13.8 and 14.9 µm/m.K (25-500°C).

Contraindication:

If patients are known to be allergic to any of the components, the material should not be applied.

Controlled interaction.

Antagon Interaction is the new normally expanding, high-melting generation of controlled-interactivity ceramics for traditional alloys. With this ceramic, it is possible to prepare a restauration which exhibits precise control over the light and colour characteristics once it has been placed in the patient's mouth. The layering structure developed during buildup creates a natural interaction of opalescence and fluorescence. With this intelligent type of ceramic, the restoration reflects every incidence of light as naturally as a normal tooth would.

Control and precision.

The layering structure is created in the usual way. The dental technician can exercise precise control over the restoration's layers, ensuring that the result meets all requirements. The highly pragmatic and simple organisation of the harmonised system of colours and powders is reflected in all the components of our product range, the ceramic powders (jar labels), the layer organiser and the layering instructions.

TABLE OF CONTENTS. **PAGE**

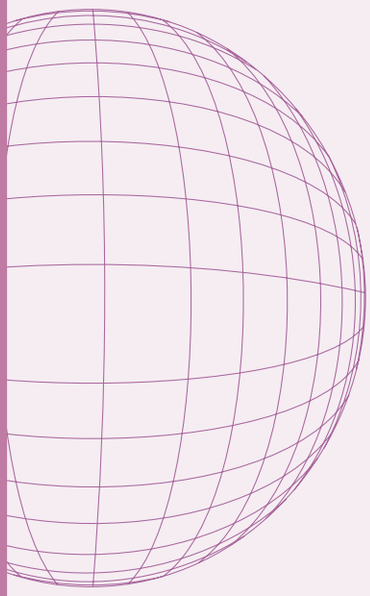
The interaction of fluorescence, opalescence, colour and light yields natural aesthetics.

With its functional, layered structure, Antagon Interaction has a natural look. Consequently, all layers, whether deep in the restoration or close to the roots are fluorescent, while the remaining layers are predominantly transparent and opalescent. This functional division of properties – where properties are geared to one another precisely – makes this patented system unique and gives rise to the interplay (interaction) that occurs automatically in normal structures. As a result, crowns have a completely natural appearance.

***opaque dentin* shadeguide**

Colour determination and Antagon Interaction shadeguides.

Antagon Interaction is 100% compatible with Lumin® vacuüm/Vitapan® classical.
However, it is vital that technicians working on the restoration use the same reference material and communicate clearly with one another. The Antagon Interaction shadeguides' pellets are made of the original ceramic, which enable simple and accurate colour determination



***dentin* shadeguide**

Accurate colours.

The Antagon Interaction system employs colour information in a consistent manner. The colour of the completed restoration matches the tooth's natural colour. Powder combinations can easily be determined using the *layer organiser.*

***incisal* shadeguide**

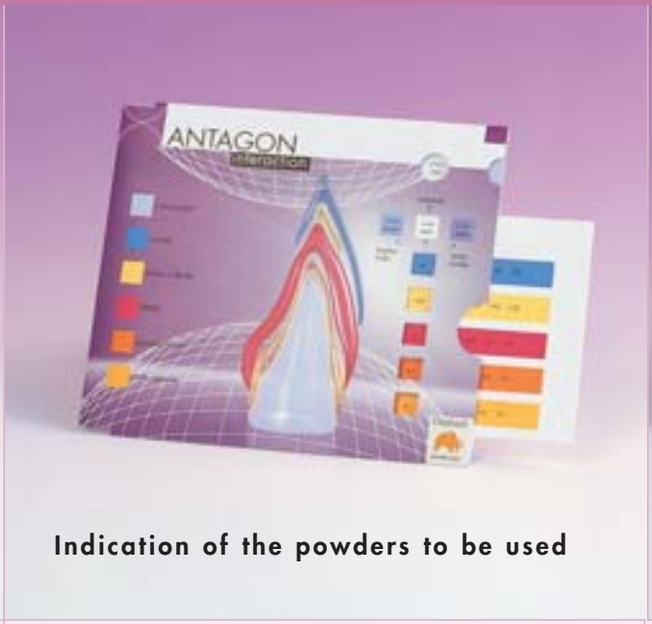
Instructions for optimal colour determination.

Ask yourself the following questions from time to time:

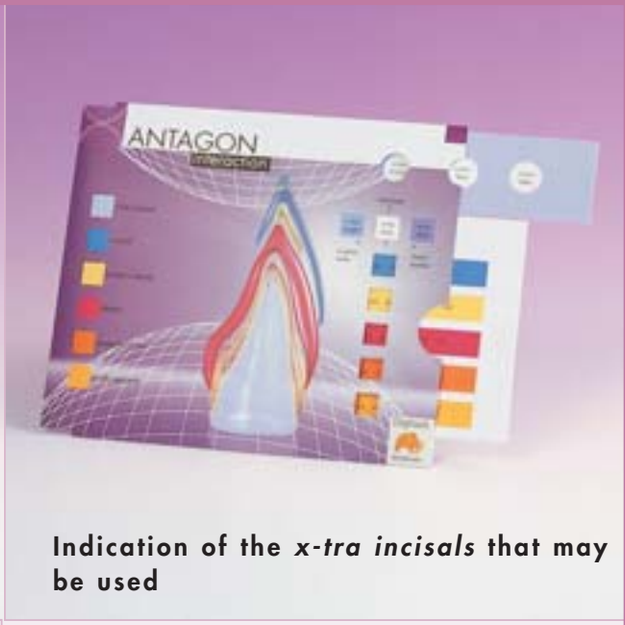
- Am I determining the colour under consistent light conditions?
- Is my perception affected by the environment (e.g. sharp colour contrasts)?
- Am I using the right shadeguide?
- Am I examining the patient's mouth under the optimal 45° angle?

Shadeguide of original ceramic

Layer Organiser



Indication of the powders to be used



Indication of the *x-tra incisals* that may be used

The layer organiser.

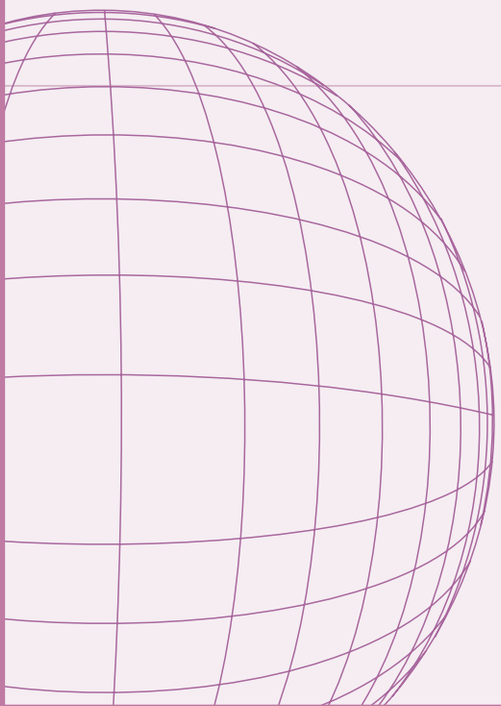
The layer organiser is a practical and easy-to-use tool to determine which powders are needed to create the intended colour. From bottom to top – *paste opaque* to *incisal* –, the powders associated with the colours involved can be determined accurately.

Slide open and read.

If you slide open the large lower part of the layer organiser, you can read, in logical order, which colour combinations are required to create the layer structure displayed. When applying the incisals or colour corrections between the first and second dentin firing, the colour can be lightened or darkened using *x-tra i bright, x-tra i medium* or *x-tra i dark*.

Individual wishes are easily met.

The upper part of the layer organiser shows the options for specific colours. During the final construction phase of the layered structure, the *incisal* third section of the element can be adjusted to the patient's wishes. The *x-tra incisals* are all opalescent and yield a natural result due to their interaction with the underlying layers.



paste opaque	A1	A2	A3	A3,5	A4	B1	B2	B3	B4	C1	C2	C3	C4	D2	D3	D4
opaque dentin	A1	A2	A3	A3,5	A4	B1	B2	B3	B4	C1	C2	C3	C4	D2	D3	D4
dentin	A1	A2	A3	A3,5	A4	B1	B2	B3	B4	C1	C2	C3	C4	D2	D3	D4
action-i dentin	1A2		3A4			1B2		3B4		1C2		3C4		1A2	1B2	1C2
x-tra incisal	x-tra i blue/x-tra i red/x-tra i grey/x-tra i orange/x-tra i clear															
	x-tra i bright/x-tra i medium/x-tra i dark															
incisal	58		59		60	57		59		60		59	60		59	

Elephant alloys

***Biogold Plus,* high gold content**

***Orion WX:* reduced gold content**

Antagon Interaction, the ceramic for traditional alloys.

Antagon Interaction can be easily fired on enameling alloys with a thermal expansion coefficient between 13.8 and 14.9 µm/m.K (25-500°C). Only the time needed for cooling may vary:

Rapid cooling (0 min.) of alloys with a thermal expansion coefficient up to 14.0 µm/m.K (25-500°C).

Normal cooling (2 min.) of alloys with a thermal expansion coefficient up to 14.3 µm/m.K (25-500°C).

Slow cooling (5-7 min.) of alloys with a thermal expansion coefficient from 14.4 µm/m.K (25-500°C).

In view of the special processing methods, observe the user instructions provided by the alloy's supplier. Crucial information regarding the most commonly used Elephant Dental alloys is included below.

Elephant offers a wide range of alloys.

Antagon Interaction is highly suitable for use with the following Elephant alloys:

For more detailed information, please ask for our alloy chart.

Biogold Plus, yellow gold enameling alloy with a high gold content.

Observe the following instructions when preparing an underlying shell with *Biogold Plus*:

- Oxydation: 3 minutes at a temperature of **950°C** without vacuum.
- Oxide reduction: sandblast the preparation with 125µm aluminium oxide at a maximum pressure of 2 bar or submerge and clean the material in a clean pickling solution for a maximum of 1 minute.
- Cool down normally after each firing (2 minutes).

  (Or, if this is impossible, cool down slowly for 5 minutes)

Orion WX gold-reduced enameling alloy.

Observe the following instructions when preparing an underlying shell with *Orion WX*:

- Oxydation: 5 min. at a temperature of **950°C** without vacuum.
- *Orion WX*: Cool down rapidly after each firing (0 min.).

Alloy	**TCE** (25-500°C)	**Cooling Down** with Antagon Interaction		**Gold**
Orion UX	13,8	Quick	(0 min.)	77,0
Orion WX	13,8	Quick	(0 min.)	52,0
Orion Vesta	13,8	Quick	(0 min.)	2,0
Bermudent H	14,0	Quick	(0 min.)	78,0
Orion UX Plus	14,1	Normal	(2 min.)*	77,1
Orion UWX	14,1	Normal	(2 min.)*	75,0
Orion GX	14,1	Normal	(2 min.)*	84,0
Orion Isis Plus	14,2	Normal	(2 min.)*	15,0
Biogold Plus	14,3	Normal	(2 min.)#	86,5
Bermudent Y	14,3	Normal	(2 min.)#	86,0
Biogold AN	14,3	Normal	(2 min.)#	86,0
BioGold Interaction	14,3	Normal	(2 min.)#	86,0
BioGold Pure	15,0	Normal	(4 min.) [1]	99,8
Orion E	14,4	Slow	(5 min.)	52,0
Orion Argos	14,7	Slow	(7 min.)	0,1

* Or, if this is impossible, quickly # Or, if this is impossible, slowly

[1] Despite the high TCE value, cool down normally because of its special composition.

***Orion Argos*, Palladiumsilver**

Orion Argos Palladium-silver enameling alloy.

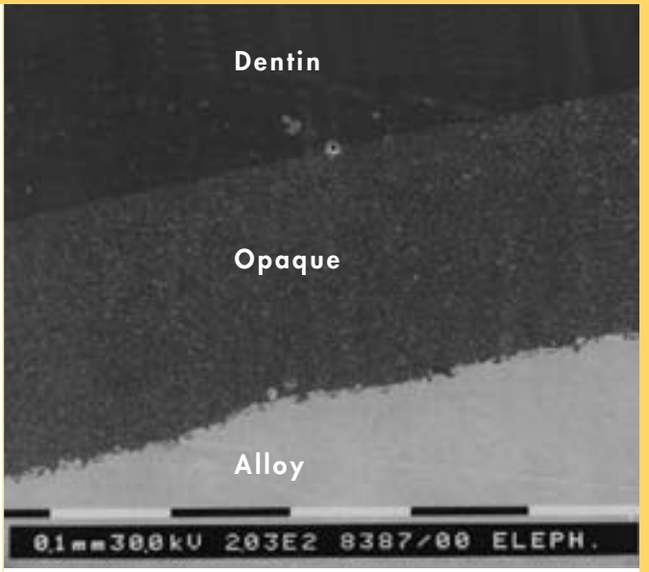
Observe the following instructions when preparing an underlying shell with *Orion Argos:*

- Oxydation: 5 minutes at a temperature of **950°C** without vacuum.
- Oxide reduction: not applicable when using *Orion Argos*.
- Cool down slowly (7 minutes) after each firing.

Platinum	Palladium	Silver
9,6	9,2	1,5
-	38,0	<1,0
-	78,9	-
19,3	-	-
7,7	9,5	2,0
-	18,5	2,5
8,0	5,0	0,9
0,2	52,0	22,5
10,5	-	-
11,0	-	-
11,0	-	-
11,0	-	-
-	-	-
-	25,6	17,0
-	53,8	36,3

Excellent bonding.

The new paste opaque ensures optimal bonding with all conventional alloys, regardless of their application.



Recommended tools

1 Finishing:

Finish the material using carbide burs or ceramic bonded stones, or both. In the final stage, the material may only be polished in one direction using delicate crosscut carbide burs! Sandblast with 125 µm aluminum oxide (max. pressure: 2-3 bar). Clean the material using a steam cleaner or in an ultrasonic bath with distilled water. Alternatively, observe the specific instructions of other alloy suppliers.

Vi-Comp®. The best Cobalt-Chromium alloy for Antagon Interaction.

Alloy composition in weight - %:
Co 61,1/Cr 32/Mo 5,5/Si 0,7/Mn 0,7.

- Oxydation: heat up gradually in ceramic furnace, without vacuum and at 50-55°C/min., from 760°C to 980°C, without hold time when the final temperature is reached.
- Remove the underlying shell from the furnace immediately to obtain a dark, evenly distributed oxide layer of *Vi-Comp®*.
- Observe the instructions in this manual when processing the ceramic.
- Cool down fast or normal (0-2 min.) after each firing.

The opaque-washbake procedure is as follows

- Oxidize in accordance with the Vi-Comp instructions for use
- After the oxidation the object shows an smooth, olive-green oxide layer (see picture)
- Do NOT remove the oxide-layer!
- Apply the paste opaque to the metal in a non-masking layer
- Follow this firing-procedure:

Dry	Starting temp.	Vacuüm starting temp.
4 min.	400°C	400°C

Rate of heat increase	Final temp.	Hold time
60°C	980°C	1-2 min.

After this washbake procedure, continue with the Antagon Interaction user manual at itemnumber 2. All firing cycles need to be cooled down at a fast or normal rate (0-2 minutes).

2 Applied *paste opaque*

i Pencil and Pencil (Brush) Cleaner:

Important: After removing it from its package, the *paste opaque* is ready for immediate use. Use the enclosed *pencil (brush) cleaner* only to moisten or clean the brush. During processing, do not use water to clean the brush. If *paste opaque* comes into contact with water, cracks or air bubbles may form in the opaque layer during firing.

Available colours: A1, A2, A3, A3,5, A4,B1, B2, B3, B4, C1, C2, C3, C4, D2, D3, D4

2a Processing:

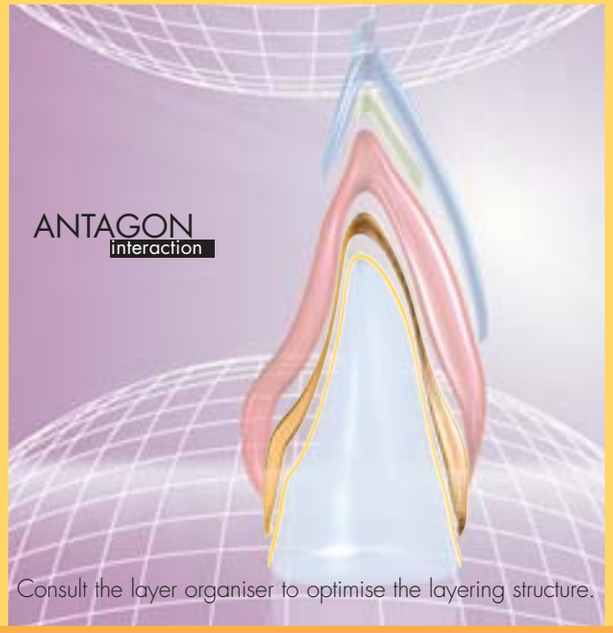
First opaque layer:

- Take the required quantity of *paste opaque* from the syringe.
- Use the enclosed paste *opaque brush*.
- Mix the material thoroughly.
- Apply the first opaque layer evenly from the incisal edge to the cervical. Make sure that it covers the entire surface.
- For a smoother surface, file the applied layer to increase its density.

Firing chart:

Drying temp.	Starting temp.	Vacuum starting temp.	Rate of heat increase
7 min.	400 °C	400 °C	60 °C/min.

Final temp.	Hold time	Surface appearance
915 °C	2 min.	eggshell gloss



Consult the layer organiser to optimise the layering structure.

2b Processing:

Second opaque layer:

- Apply the second opaque layer evenly.
- For a smoother surface, file the applied layer to increase its density.

Processing:

Drying temp.	Starting temp.	Vacuum starting temp.	Rate of heat increase
7 min.	400 °C	400 °C	60 °C/min.

Final temp.	Hold time	Surface appearance
910 °C	2 min. *	eggshell gloss

* 1 min. with vacuum, 1 min. without vacuum

Available colours: A1, A2, A3, A3,5, A4, B1, B2, B3, B4, C1, C2, C3, C4, D2, D3, D4

3 Processing:

Together, the *opaque dentin* and *dentin* constitute the basic layer of colour of the entire layering structure. With Antagon Interaction, the fluorescent layers are concentrated in more deeply lying part of the buildup. As a result, the reflected white light enhances the opalescent characteristics of the transparent upper layers. The *opaque dentin* can also be applied where little space is available and less translucency is required, for instance at the gingival or palatinal/lingual area of intermediate elements and at places where there is little space for a standard ceramic structure.

3 Applying the *opaque dentin*

4 **Applied *dentin***

Available colours: A1, A2, A3, A3,5, A4, B1, B2, B3, B4, C1, C2, C3, C4, D2, D3, D4

5 **Reduced *dentin* (cutback)**

4 Processing:

- Use *carving liquid* to mix the selected *dentin* to a cream-like consistency.
- *Superwet liquid* may be used for larger restorations to enable longer working time.
- Examine the unreduced restoration to determine the proper dimensions of the crown and remove any excess material (cutback technique).
  - —The restoration may also be worked directly in its final form.

Consult the layer organiser to optimise the layering scheme.

5 Processing:

- Cutback the material to create the desired space for the incisal material.
- More material must be removed when *action i-dentin* is used.
- An irregularly shaped dentin core ensures optimal distribution of light (see photo).

i Standard or individual:

Use of either a standard or individual layering structure is determined by the amount of cutback of the *dentins*. To create a standard layering structure, follow the steps indicated on the pictures on page 14. *Incisal* is added to the reduced *dentin*, after which the crown is fired. To achieve individual layering characteristics, use *action i-dentins* and *x-tra incisals*.

paste opaque	A1	A2	A3	A3,5	A4	B1	B2	B3	B4	C1	C2	C3	C4	D2	D3	D4
opaque dentin	A1	A2	A3	A3,5	A4	B1	B2	B3	B4	C1	C2	C3	C4	D2	D3	D4
dentin	A1	A2	A3	A3,5	A4	B1	B2	B3	B4	C1	C2	C3	C4	D2	D3	D4
action-i dentin	1A2		3A4			1B2		3B4		1C2		3C4		1A2	1B2	1C2
x-tra incisal	x-tra i blue/x-tra i red/x-tra i grey/x-tra i orange/x-tra i clear															
	x-tra i bright/x-tra i medium/x-tra i dark															
incisal	58		59		60	57		59		60		59		60		59

6 Applied *action-i dentin*

Available colours:
1A2, 3A4, 1B2, 3B4, 1C2, 3C4

6 Processing:

Action-i dentins are fluorescent dentins that have been sorted according to colour and brightness. They can be used to accentuate the characteristics of the incisal section of the element (e.g. mamelons) and to influence the crown's chroma.
i=incisal, i=individual, i=intensive, i=interactive

- Use *carving liquid* to mix the *action i-dentins*, like the *dentins*, into a cream-like consistency.
- *Superwet liquid* may be used for longer spans to enable a longer working time for the restoration.

Consult the layer organiser to optimise the layering scheme.

Available colours: *x-tra i blue, x-tra i red, x-tra i orange, x-tra i grey, x-tra i clear*

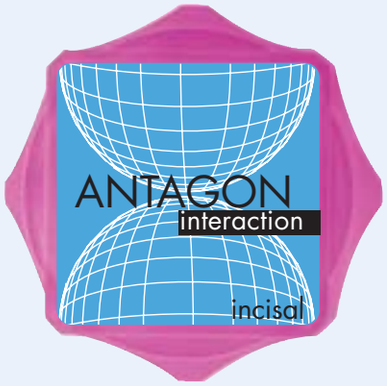
7a *x-tra incisals* to create individual characteristics

7 Accurate individual characteristics.

x-tra incisals can be divided into those that provide added value (i.e. powders that determine the colour value – see pages 11 and 12) and those that allow for the expression of individual characteristics.
The latter are available in the colours *x-tra i red, x-tra i grey, x-tra i orange, x-tra i blue* and *x-tra i clear.*
x-tra incisals are opalescent, making it very easy to add individual characteristics to the incisal sections.
Always cover *x-tra i blue* with an *incisal* layer.

7b Applying various *x-tra incisals*

8a Covering the edges with *incisal*



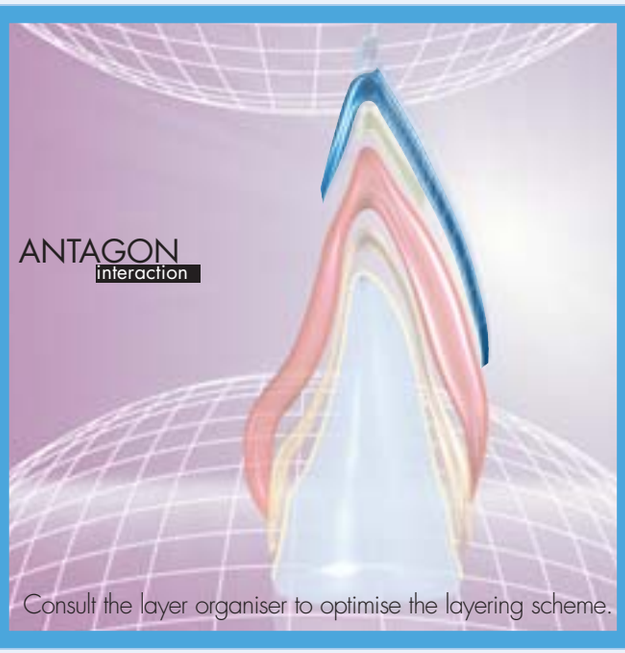
Available colours: 57, 58, 59, 60

8b Incisal sandwich structure

8a Processing:

The opalescent properties of Antagon Interaction *incisals* have a natural and aesthetic effect on the crown, even with changing light conditions. Opalescence is guaranteed through five firings. For optimal effect, Antagon Interaction *incisal* powders must be applied in **relatively thin** layers.

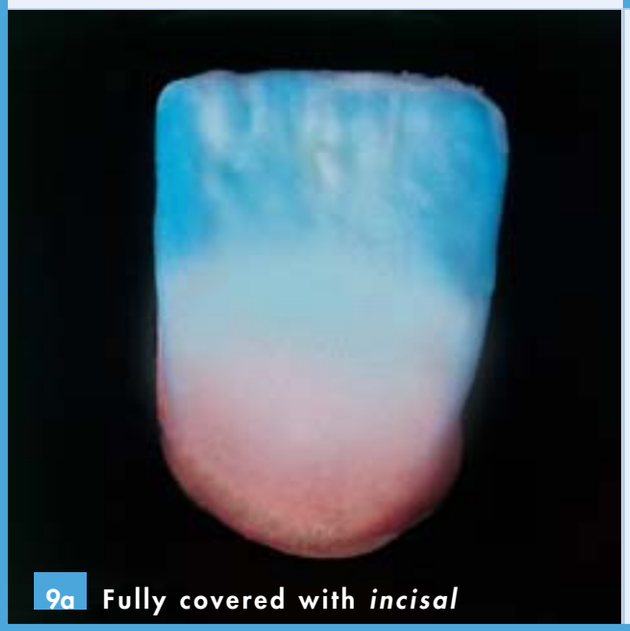
- Use *carving liquid* to mix the Antagon Interaction *incisal*, like the *dentin*, into a cream-like consistency.
- *Superwet liquid* may be used for larger objects to enable a longer treatment of the restoration.



Consult the layer organiser to optimise the layering scheme.

8b Processing:

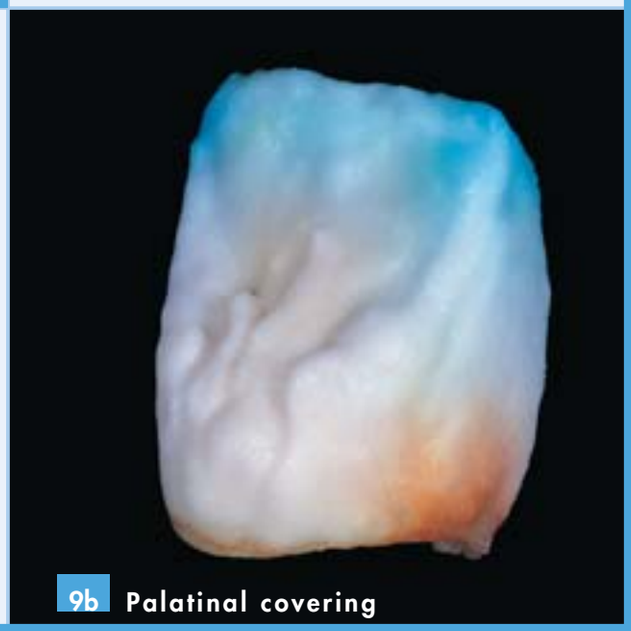
The *incisals* can be used together with the *x-tra incisals* to obtain a variegated layered structure.



9a Fully covered with *incisal*

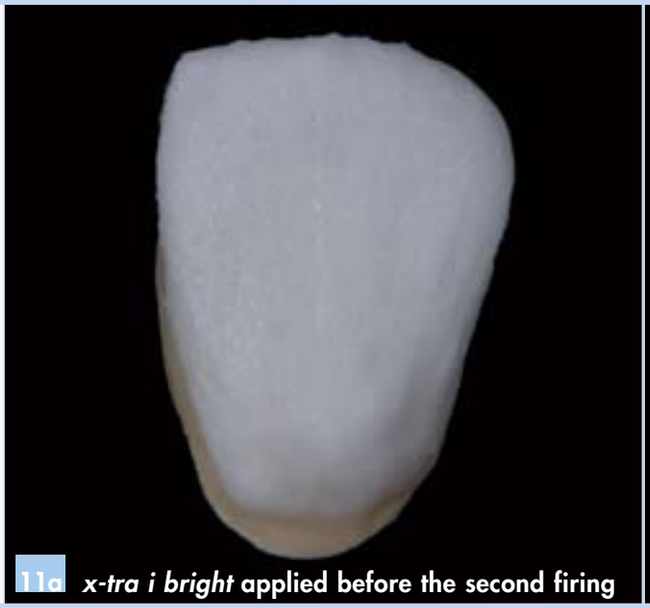
9 'A slightly darker tone:':

The colour value can be very accurately controlled using *x-tra incisals bright, medium* and *dark*.
For example, you can use *x-tra i dark* if the processing instructions indicate that the cervical should be a bit darker.



9b Palatinal covering

Lighter? => *x-tra i bright*



11a *x-tra i bright* applied before the second firing

11b The crown after the second firing

10 The crown after the first firing

Neutral? => *x-tra i medium*

11 The use of *bright, medium and dark x-tra incisals* enables the adjustment of the crown's colour in the final stage without having to polish the restoration.

Firing chart for second phase:

Drying temp.	Starting temp.	Vacuum starting temp.	Rate of heat increase
3-5 min.	500 °C	500 °C	60°C/min.

Final temp.	Hold time	Surface appearance
890°C	1-2 min.	matte finish

10 **Firing chart for first phase:**

Drying temp.	Starting temp.	Vacuum starting temp.	Rate of heat increase
5-7 min.	500 °C	500 °C	60°C/min.

Final temp.	Hold time	Surface appearance
895°C	1-2 min.	matte finish

A slightly darker tone

The colour value can be very accurately controlled using x-tra *incisals bright, medium and dark*. For example, you can use *x-tra i dark* if the processing instructions indicate that the cervical should be a bit darker.

Darker? => *x-tra i dark*

Processing 1:

- Use *carving liquid* to mix Antagon Interaction *correction* into a cream-like consistency.
- Apply the desired quantity to the location to be corrected and condense it thoroughly.
- Fire the material in accordance with the firing chart.

Firing chart 1:

Drying temp.	Starting temp.	Vacuum	Rate of heat increase
3-5 min.	500 °C	yes	60°C/min.
Final temp.	Hold time	Vacuum	Surface appearance
830-850°C	1-2 min.	1 min.	semi-glossy

Processing 2:

- Use *stain liquid* (and selected *stains*, if required) to mix the material into a cream-like consistency.
- Apply the desired quantity to the location to be corrected and increase its density.
- Fire the material in accordance with the firing chart.

Firing chart 2:

Drying temp.	Starting temp.	Vacuum	Rate of heat increase
6 min.	500 °C	up to 880°C	60°C/min.
Final temp.	Hold time	Vacuum	Surface appearance
880°C	1-2 min.	0 min.	semi-glossy

Easy correction material:

Antagon Interaction *correction* is an unpigmented and low-fusing material with physical properties that are compatible with those of Antagon Interaction. It can be used to:

- correct contact points.
- correct occlusal or incisal edges.
- improve the surface shape.

Shaping the surface: essential for optimal opalescence.

The shape of the surface is key to the restoration's aesthetic properties, especially those related to the incidence of light. The surface structures of the neighbouring elements on the plaster model can be highlighted using silver powder. This helps to determine what the surface structure should be like.

12 Processing:

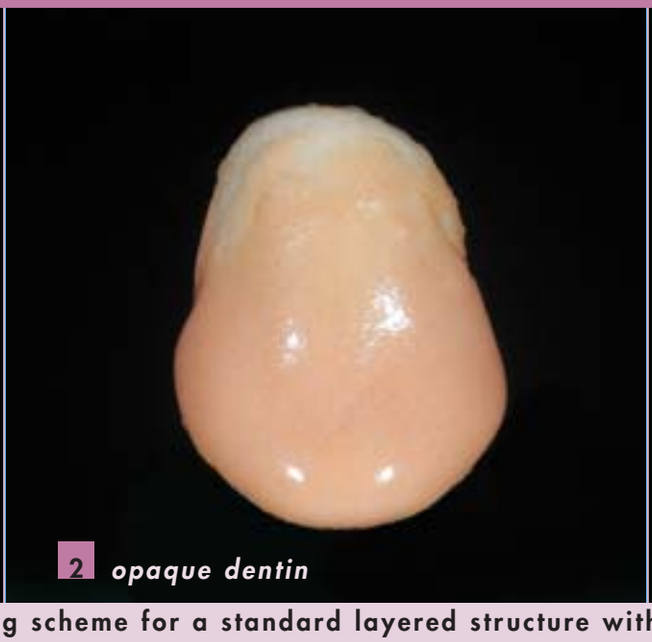
- Mix *Antagon+Carrara Interaction glaze* and *stain liquid* until it is an even and cream-like mass.
- Apply a thin layer on the surfaces and distribute evenly.
- Fire the material in accordance with the firing chart.

Firing chart:

Drying temp.	Starting temp.	Vacuum	Rate of heat increase
2-3 min.	500 °C	no	60°C/min.
Final temp.	Hold time	Vacuum	Surface appearance
885°C	1-2 min.	no	glossy

12 Completed glossy crown

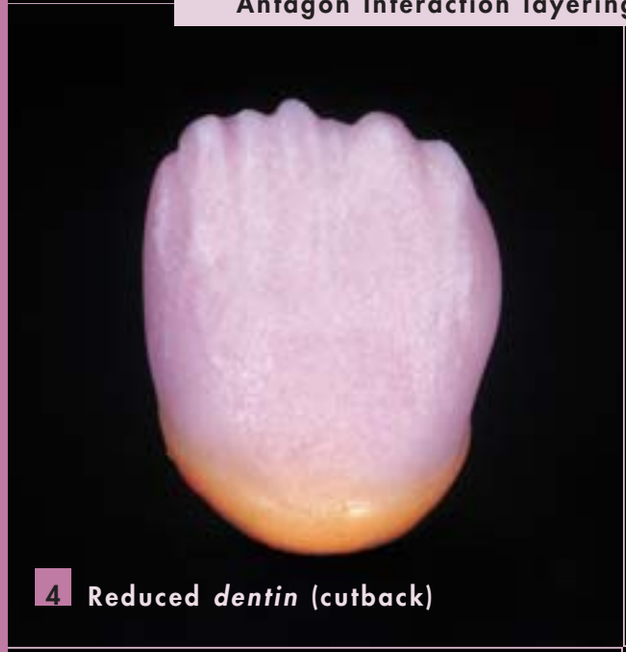
1 *paste opaque*



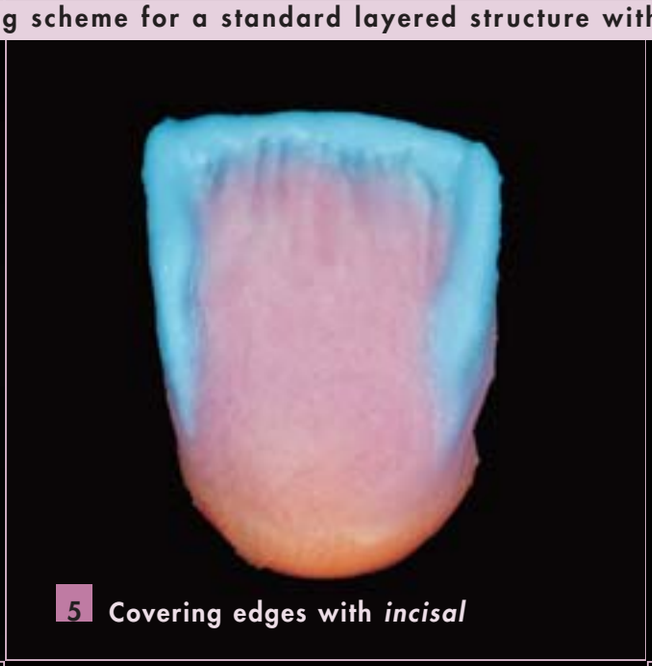
2 *opaque dentin*

3 Fully built-up *dentin*

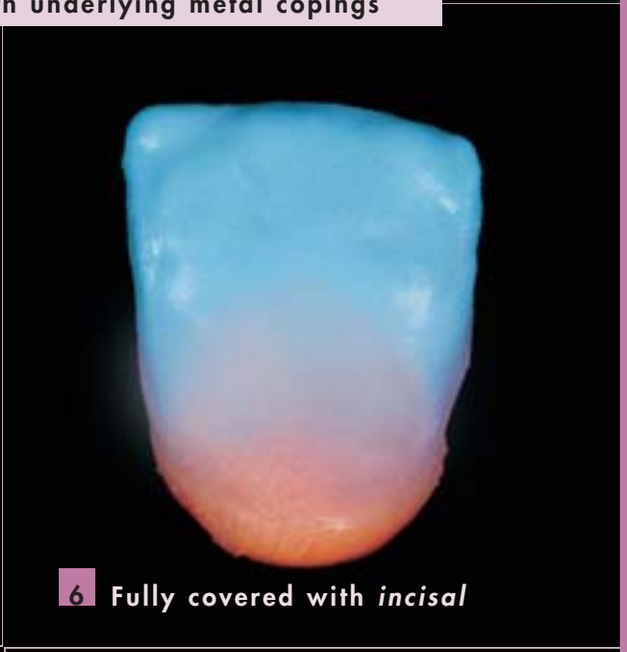
Antagon Interaction layering scheme for a standard layered structure with underlying metal copings



4 Reduced *dentin* (cutback)



5 Covering edges with *incisal*



6 Fully covered with *incisal*

7 First firing

8 Second firing

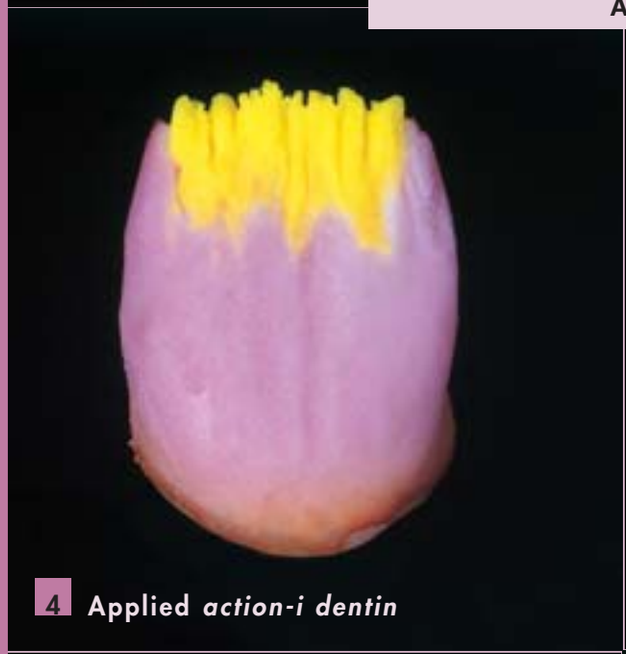
9 Completed crown

1 Applied *paste opaque*

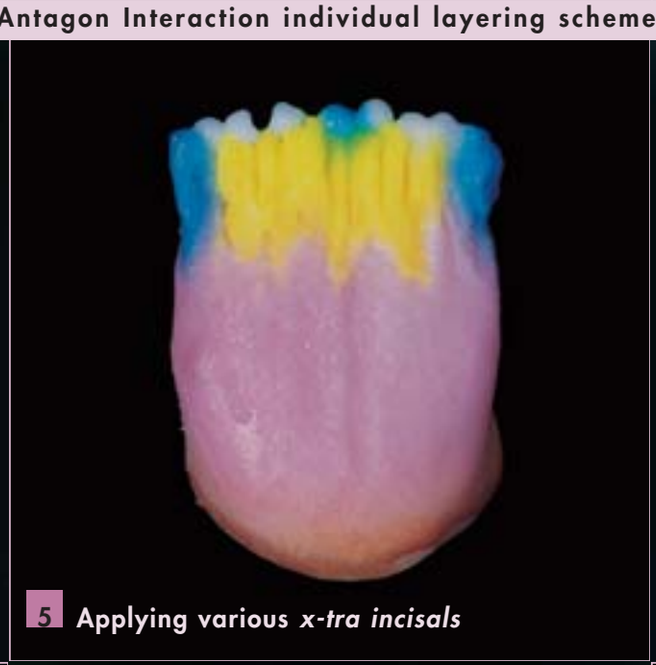
2 Applying the *opaque dentin*

3 Reduced *dentin* (cutback)

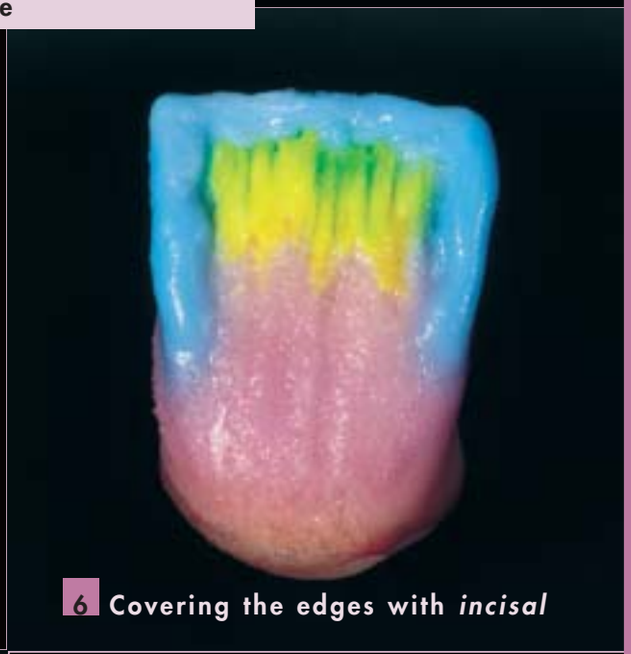
Antagon Interaction individual layering scheme



4 Applied *action-i dentin*



5 Applying various *x-tra incisals*



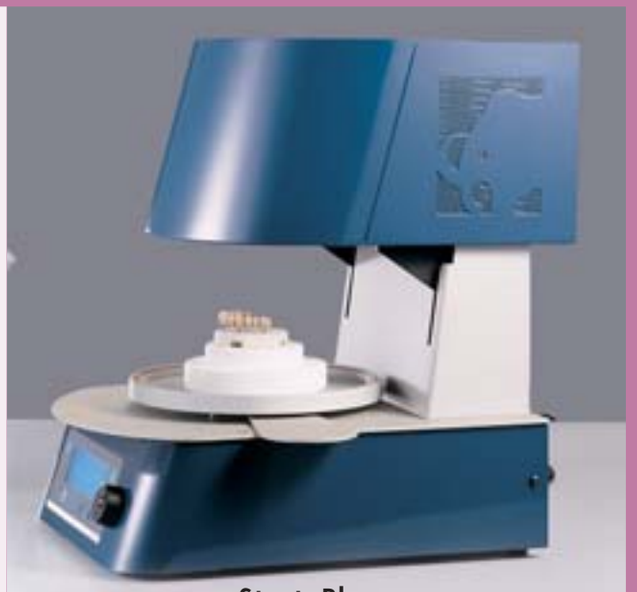
6 Covering the edges with *incisal*

7 Incisal sandwich structure

8 Fully covered with *incisal*

9 Completed glossy crown

StratoPlus/StratoPress (general firing programme)		1st paste opaque	2nd paste opaque	Margin	1st Dentin	2nd Dentin	Glaze	Correction mass
Preheat or starting temperature:	(°C)	400	400	500	500	500	500	500
Drying and preheating time:	(min)	7	7	4	5–7	3–5	4	3–5
Rate of heat increase:	(°C/min)	60	60	60	60	60	60	60
Final temperature:	(°C)	915	910	895	895	890	885	830–850
Hold time:	(min)	1–2	1–2	1–2	1–2	1–2	1–2	1–2
Vacuum starting temp.	(°C)	400	400	500	500	500	–	500
Vacuum final temp.	(°C)	915	910	895	895	890	–	830–850



StratoPlus

Choice of ceramic alloy:

Antagon Interaction can be easily fired on enameling alloys with a thermal expansion coefficient between 13.8 and 14.9 µm/m.K (25-500°C).

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Slow cooling down from 14.4 µm/m.K – **5-7 min.**

Important:

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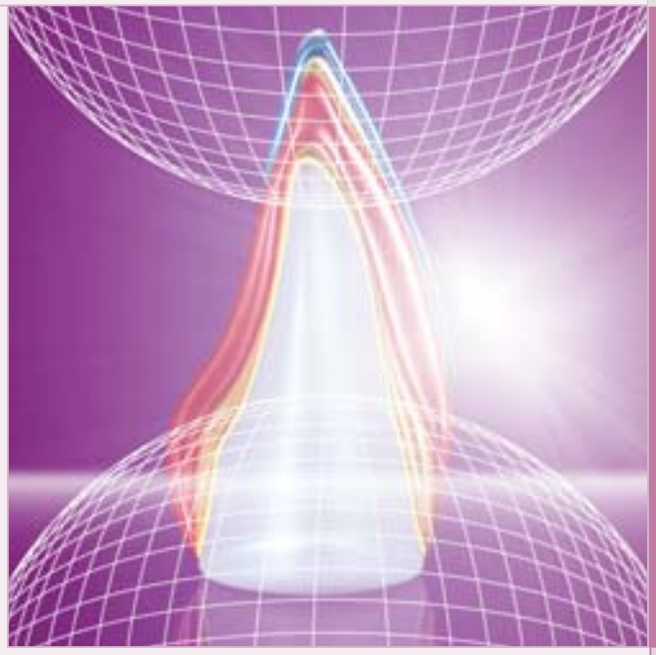


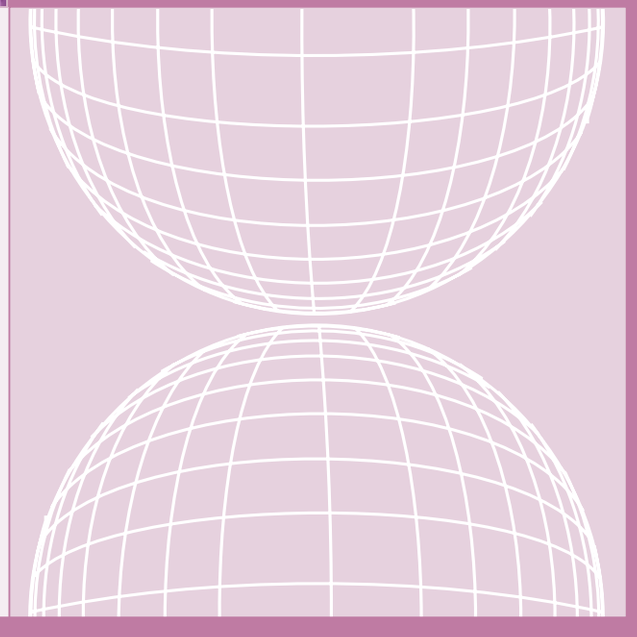
Cooling down phase:

Alloy	**WAK** (25-500°C)	**Cooling down** with Antagon Interaction	
Orion UX	13,8	Quick	(0 min.)
Orion WX	13,8	Quick	(0 min.)
Orion Vesta	13,8	Quick	(0 min.)
Bermudent H	14,0	Quick	(0 min.)
Orion UX Plus	14,1	Normal	(2 min.)*
Orion UWX	14,1	Normal	(2 min.)*
Orion GX	14,1	Normal	(2 min.)*
Orion Isis Plus	14,2	Normal	(2 min.)*
Biogold Plus	14,3	Normal	(2 min.)#
Bermudent Y	14,3	Normal	(2 min.)#
Biogold AN	14,3	Normal	(2 min.)#
BioGold Interaction	14,3	Normal	(2 min.)#-
BioGold Pure	15,0	Normal	(4 min.) [1]
Orion E	14,4	Slow	(5 min.)
Orion Argos	14,7	Slow	(7 min.)

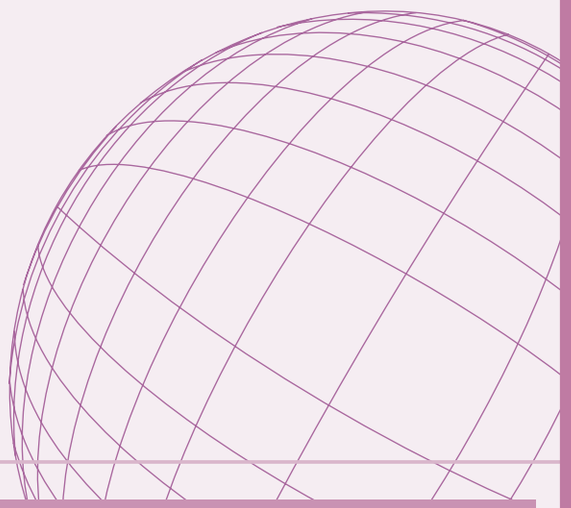
* Or, if this is impossible, quickly # Or, if this is impossible, slowly

[1] Despite the high TCE value, cool down normally because of its special composition.

paste opaque	A1	A2	A3	A3,5	A4	B1	B2	B3	B4	C1	C2	C3	C4	D2	D3	D4
opaque dentin	A1	A2	A3	A3,5	A4	B1	B2	B3	B4	C1	C2	C3	C4	D2	D3	D4
dentin	A1	A2	A3	A3,5	A4	B1	B2	B3	B4	C1	C2	C3	C4	D2	D3	D4
action-i dentin	1A2		3A4			1B2		3B4		1C2		3C4		1A2	1B2	1C2
x-tra incisal	x-tra i blue/x-tra i red/x-tra i grey/x-tra i orange/x-tra i clear															
	x-tra i bright/x-tra i medium/x-tra i dark															
incisal	58		59		60	57		59		60		59		60		59



Vacumat 2500	Stand-by temp.	Final temp.	Drying time	Heating rate	Hold time	Time vacuüm ON
1st paste opaque firing	400°C	915°C	7.0	60	2.0	1.8
2nd paste opaque firing	400°C	910°C	7.0	60	2.0	1.8
Margin firing	500°C	895°C	4.0	60	2.0	1.7
1st dentin firing	500°C	895°C	6.0	60	2.0	1.5
2nd dentin firing	500°C	890°C	4.0	60	2.0	1.5
Glaze firing	500°C	885°C	4.0	60	0.5	0.0
Correction mass firing	500°C	830°C	4.0	60	2.0	1.0



Important:

The firing temperatures indicated are target values. Temperatures may vary from one ceramic furnace to another and must be adapted accordingly.

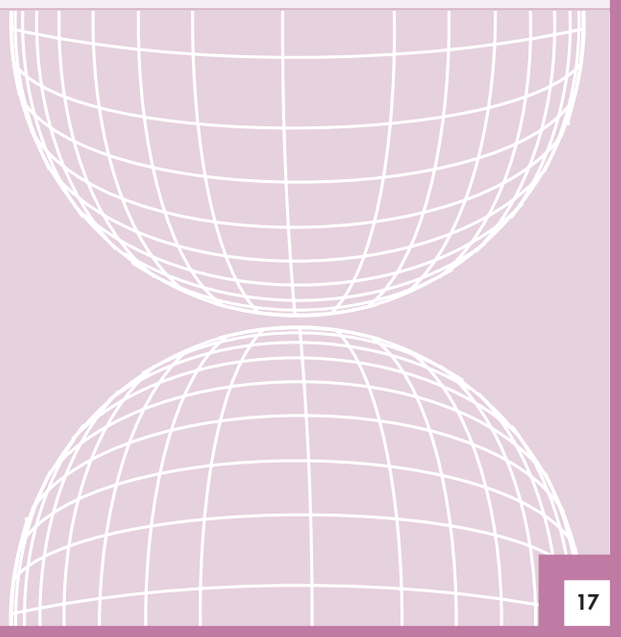
Choice of ceramic alloy:

Antagon Interaction can be easily fired on enameling alloys with a thermal expansion coefficient between 13.8 and 14.9 µm/m.K (25-500°C).

Quick cooling down to 14.0 µm/m.K – **0 min.**
Normal cooling down to 14.3 µm/m.K – **2 min.**
Slow cooling down from 14.4 µm/m.K – **5-7 min.**

Austromat 3001	
1st opaque firing	C400 T180 T240•L9V9 T060•C915 T60 VO T60 CO LO T2 C400
2nd opaque firing	C400 T180 T240•L9V9 T060•C915 T60 VO T60 CO LO T2 C400
1st dentin firing	C500 T120 T180•L9V9 T060•C895 T60 VO T60 CO LO T2 C500
2nd dentin firing	C500 T120 T120•L9V9 T060•C890 T60 VO T60 CO LO T2 C500
Glaze firing	C500 T120 T120•L9 T060•C885 T60 CO LO T2 C500
Margin firing	C500 T120 T180•L9V9 T060•C895 T60 VO T60 CO LO T2 C500
Correction mass firing	C500 T120 T90•L9V9 T060•C830 T60 VO T60 CO LO T2 C500

Programat P90/P95	Standby temp.	Heating rate	Firing temp.	Closing time	Hold time	Vacuum ON	Vacuum OFF
1st paste opaque firing	400°C	60	915°C	7	1	450°C	915°C
2nd paste opaque firing	400°C	60	910°C	7	1	450°C	910°C
Margin firing	450°C	60	895°C	4-5	1	450°C	895°C
1st dentin firing	450°C	60	895°C	5-7	1	450°C	895°C
2nd dentin firing	450°C	60	890°C	3-5	1	450°C	890°C
Glaze firing	450°C	60	885°C	4	0,5-1	450°C	–
Correction mass firing	400°C	60	830°C	4	1-2	450°C	830°C



Vacumat 200/250/300	Stand-by temp.	Final temp.	Drying time	Heating rate	Hold time	Time vacuum ON
1st paste opaque firing	400 °C	915 °C	7.0	8.5	1.0	9.5
2nd paste opaque firing	400 °C	910 °C	7.0	8.5	1.0	8.5
Margin firing	500 °C	895 °C	5.0	6.5	1.0	7.0
1st dentin firing	500 °C	895 °C	7.0	6.5	1.0	7.0
2nd dentin firing	500 °C	890 °C	4.0	6.5	1.0	7.0
Glaze firing	500 °C	885 °C	4.0	6.5	0.5	0.0
Correction mass firing	500 °C	830 °C	4.0	5.5	1.5	6.0

Important:

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Choice of ceramic alloy:

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Normal cooling down to 14.3 µm/m.K – **2 min.**
Slow cooling down from 14.4 µm/m.K – **5-7 min.**

Multimat MCII/Mach2	Preheat temp.	Drying	Pre-heating	Time vacuum ON	Hold time	Firing temp.	Heating rate	Vacuum
1st paste opaque firing	400 °C	7.0	2.0	1.0	1.0–2.0	915 °C	60	max.
2nd paste opaque firing	400 °C	7.0	2.0	1.0	1.0–2.0	910 °C	60	max.
Margin firing	500 °C	4.0	1.0	1.0	1.0–2.0	895 °C	60	max.
1st dentin firing	500 °C	5.0	2.0	1.0	1.0–2.0	895 °C	60	max.
2nd dentin firing	500 °C	3.0	2.0	1.0	1.0–2.0	890 °C	60	max.
Glaze firing	500 °C	3.0	1.0	0.0	1.0–2.0	885 °C	60	–
Correction mass firing	500 °C	3.0	1.0	1.0	1.0–2.0	830 °C	60	max.

Programat X 1	Stand-by temp.	Closing time (min.)	Heating rate	Firing temp. (T.)	Hold time (min.)	Vacuum level (%)	Vac. ON (°C)	Vac. OFF (°C)
1st paste opaque firing	400 °C	7:00	60	915 °C	1:00	100	450	1° below T.
2nd paste opaque firing	400 °C	7:00	60	910 °C	1:00	100	450	1° below T.
Margin firing	400 °C	4:00	60	895 °C	1:00	100	450	1° below T.
1st dentin firing	400 °C	5:00	60	895 °C	1:00	100	450	1° below T.
2nd dentin firing	400 °C	4:00	60	890 °C	1:00	100	450	1° below T.
Glaze firing	400 °C	4:00	60	885 °C	0:30	–	no	no
Correction mass firing	400 °C	4:00	60	830 °C	1:00	100	450	1° below T.

Heramat C		1st paste opaque firing	2nd paste opaque firing	Margin firing	1st dentin firing	2nd dentin firing	Glaze firing	Correction mass firing
Starting temp.	(°C)	400	400	500	500	500	500	500
Drying time	(min)	7:00	7:00	4:00	5:00	4:00	3:00	3:00
Preheating time	(min)	1:00	1:00	1:00	2:00	2:00	1:00	1:00
Heating rate	(°C/min)	60	60	60	60	60	60	60
Final temp.	(°C)	915	910	895	895	890	855	830
Hold time	(min)	1:00	1:00	1:00	1:00	1:00	1:00	1:30
Tempering temp.	(°C)	–	–	–	–	–	–	–
Tempering time	(min)	–	–	–	–	–	–	–
Cooling down time	(min)	–	–	–	–	–	–	–
Vacuum on	(°C)	400	400	500	500	500	–	500
Vacuum off	(°C)	915	910	895	895	890	–	830
Time vacuum ON	(min)	0.30	0.30	0.30	0.30	0.30	–	1.00

Important:

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Slow cooling down from 14.4 µm/m.K – **5-7 min.**

CergoCompact/CergoPress		1st paste opaque firing	2nd paste opaque firing	Margin firing	1st dentin firing	2nd dentin firing	Glaze firing	Correction mass firing
Preheat or starting temperature:	(°C)	400	400	500	500	500	500	500
Drying and preheating time:	(min)	7	7	4	5–7	3–5	4	3–5
Rate of heat increase:	(°C/min)	60	60	60	60	60	60	60
Final temperature:	(°C)	910	905	890	890	885	880	825–845
Hold time:	(min)	1–2	1–2	1–2	1–2	1–2	1–2	1–2
Vacuum starting temp.:	(°C)	400	400	500	500	500	–	500
Vacuum final temp.:	(°C)	910	905	890	890	885	–	825–845

Austromat M	START		↑	→	Vac	°C↗min.	END	→	1↘	↘2
1st paste opaque firing	400	3	3	1	9	60	915	1:00	0	0
2nd paste opaque firing	450	3	3	1	9	60	910	1:00	0	0
Margin firing	500	3	3	1	9	60	895	1:00	0	0
1st dentin firing	500	3	3	2	9	60	895	1:00	0	0
2nd dentin firing	500	2	3	2	9	60	890	1:00	0	0
Glaze firing	500	2	2	2	0	60	885	0:30	0	0
Correction mass firing	500	3	2	1	9	60	830	1:00	0	0

Visual material: Elephant and ZTM Jan Schünemann (Bielefeld,Germany), except * Od. Fabiano Bolzani (Trezzano Rosa, Italy) and # Florian Fischer (Rotweil, Germany)

Antagon Interaction:

The best enameling ceramic for regular firing alloys.

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Antagon Interaction is designed to be used with the following Elephant alloys.
(For more detailed information, please ask for our alloy table.)

Alloy	**WAK** (25-500°C)	**Cooling down** with Antagon Interaction		**Gold**	**Platinum**	**Palladium**	**Silver**
Orion UX	13,8	Quick	(0 min.)	77,0	9,6	9,2	1,5
Orion WX	13,8	Quick	(0 min.)	52,0	-	38,0	<1,0
Orion Vesta	13,8	Quick	(0 min.)	2,0	-	78,9	-
Bermudent H	14,0	Quick	(0 min.)	78,0	19,3	-	-
Orion UX Plus	14,1	Normal	(2 min.)*	77,1	7,7	9,5	2,0
Orion UWX	14,1	Normal	(2 min.)*	75,0	-	18,5	2,5
Orion GX	14,1	Normal	(2 min.)*	84,0	8,0	5,0	0,9
Orion Isis Plus	14,2	Normal	(2 min.)*	15,0	0,2	52,0	22,5
Biogold Plus	14,3	Normal	(2 min.)#	86,5	10,5	-	-
Bermudent Y	14,3	Normal	(2 min.)#	86,0	11,0	-	-
Biogold AN	14,3	Normal	(2 min.)#	86,0	11,0	-	-
BioGold Interaction	14,3	Normal	(2 min.)#	86,0	11,0	-	-
BioGold Pure	15,0	Normal	(4 min.) [1]	99,8	-	-	-
Orion E	14,4	Slow	(5 min.)	52,0	-	25,6	17,0
Orion Argos	14,7	Slow	(7 min.)	0,1	-	53,8	36,3

* Or, if this is impossible, quickly
\# Or, if this is impossible, slowly
[1] Despite the high TCE value, cool down normally because of its special composition.

Elephant
dental health products

We support your success.

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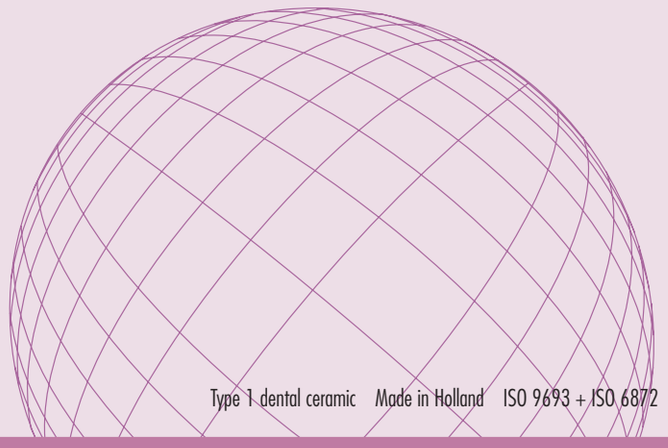

CE 0344

Type 1 dental ceramic Made in Holland ISO 9693 + ISO 6872 Rx only feb-2007