

# Survey of alloys tested by VITA in combination with VITA VM 15

Please pay attention to the relevant explanations included in the information on the use prior to the use!

<b>High Gold Content Alloys</b>				
<b>Alloy name</b>	<b>Manufacturer / Distribution<sup>a)</sup></b>	<b>CTE [<math>10^{-6} \cdot K^{-1}</math>] * 25-600°C (25-500°C)</b>	<b>Cooling *</b>	<b>Cooling **</b>
Adornova LFC	Ador	16,8 (16,7)	--	N
Adornova LC	Ador	16,8 (16,3)	--	N
Argistar 73	Argen	16,8 (16,3)	--	N
Dent Gold Norm	Argen	16,8 (16,7)	--	N
Argistar Sun	Argen	17,0 (16,3)	--	N
Argistar Bio 75 PF	Argen	16,1 (15,8)	--	N
Esteticor Concorde	Cendres & Métaux	16,4 (16,2)	--	N
DGV08H	Cendres & Métaux	16,4 (15,9)	--	N
Degunorm	DeguDent	16,8 (16,7)	N	N
Mainbond EH	Heraeus	(16,0)	N	N
Mainbond A	Heraeus	(16,3)	N	N
Bio-Activity	Wegold	16,1 (16,0)	N	N

<b>Gold Reduced Alloys</b>				
<b>Alloy name</b>	<b>Manufacturer / Distribution<sup>a)</sup></b>	<b>CTE [<math>10^{-6} \cdot K^{-1}</math>] * 25-600°C (25-500°C)</b>	<b>Cooling *</b>	<b>Cooling **</b>
Adornova ECO	Ador	17,3 (16,9)	--	N
Adornova PS+	Ador	16,8 (16,6)	--	N
Adornova NF	Ador	16,9 (16,7)	--	N
Argistar 38	Argen	17,3 (16,9)	--	N
Argisafe 545	Argen	16,9 (16,7)	--	N
Argistar E	Argen	17,3 (17,1)	--	N
Auro Lloyd KF	Bego	17,3 (17,1)	--	N
Bego Lloyd LFC	Bego	16,9 (16,4)	--	L
ECO d'OR	Bego	17,4 (17,0)	--	N
Esteticor Ecologic	Cendres & Métaux	17,5 (17,0)	--	N
Cehadentor CF 2	Hafner	17,5 (17,2)	S	N
Hera KF	Heraeus	(16,7)	S	N
Ecobest	Koos	(16,9)	--	N
Pontor LFC	Metalor	17,0 (16,7)	N	N

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<b>Alloy name</b>	<b>Manufacturer / Distribution<sup>a)</sup></b>	<b>CTE [<math>10^{-6} \cdot K^{-1}</math>] * 25-600°C (25-500°C)</b>	<b>Cooling * *</b>	<b>Cooling ** **</b>
Alphador KF	Schütz	(16,7)	--	N
Alphador ECO	Schütz	17,3 (16,9)	--	N
Ecogold	Wegold	17,4 (17,0)	S	N

<b>Palladium Silver Base Alloys (Palladium Content up to 40%)</b>				
<b>Alloy name</b>	<b>Manufacturer / Distribution<sup>a)</sup></b>	<b>CTE [<math>10^{-6} \cdot K^{-1}</math>] * 25-600°C (25-500°C)</b>	<b>Cooling * *</b>	<b>Cooling ** **</b>
Argistar 40	Argen	16,7 (16,6)	--	N
CeHa LIGHT LFC	Hafner	16,7 (16,1)	N	N
AlbaSun	Heraeus	17,1 (16,6)	--	N
Simidur A	Wieland	(16,2)	N	N

<b>Base Metal Alloys</b>				
<b>Alloy name</b>	<b>Manufacturer / Distribution<sup>a)</sup></b>	<b>CTE [<math>10^{-6} \cdot K^{-1}</math>] * 25-600°C (25-500°C)</b>	<b>Cooling * *</b>	<b>Cooling ** **</b>
Heraenium Sun	Heraeus	16,4 (16,2)	N	N

- \* according to the information of the alloy manufacturers
- \*\* based on sample tests performed by VITA
- a) Distribution
- there are no details from the alloy manufacturer available

**Cooling:** N = normal      S = slow

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## Information on the use

### Attention! Important information!

#### Information must be read prior to the use!

This survey only intends to provide help for the selection of alloys **without any obligation on the part of VITA. VITA Zahnfabrik will not assume any liability** for the safety and efficiency of the combination of VITA VM 15 and the alloys listed in the survey and for any damage resulting from lack of suitability of the alloy for processing with VITA VM 15 and from any product modifications or quality defects of the alloy in use. The same shall apply to damage resulting from improper handling or processing as well for damage resulting from inappropriate or faulty working instructions for the alloys for which VITA Zahnfabrik will not assume any liability either.

The information provided in this survey refers exclusively to the compatibility of the CTE of the listed alloy with VITA VM 15 for the fabrication of veneers. Any evaluation of the quality of the respective metal-ceramic bond shall not be made in this survey.

**The results are exclusively based on sample testing of veneering. VITA Zahnfabrik has no influence on variations in quality in different charges of the alloys and product modifications by the manufacturers.**

**Prior to processing VITA VM 15 with one of the alloys listed in this survey, the user must verify the suitability of the alloy for processing with VITA VM 15!**

In the sample tests of firing results and thermal stability performed by VITA Zahnfabrik the alloys listed in this survey produced good results in combination with VITA VM 15. We expressly point out that these tests **were only sample tests** (at least 6 single crowns and 1 three-unit bridge).

If perfect results were obtained in the tests, the respective alloys were included in our list.

Thermal fatigue resistance, however, also depends on the size of the object, structure, hardness, thermal conductivity of the alloy in use, percentage of old metal, casting quality and, in particular, on the firing procedure so that it can not be concluded that the use of the alloys listed will always ensure perfect results.

Additionally, the coefficient of thermal expansion (CTE) of all alloys listed was determined. In some cases the CTE values provided by the alloy manufacturers may differ from our measurement results. Our result of the CTE measurement formed the basis for the firing cycles in the tests performed by VITA Zahnfabrik. After firing, all restorations were assessed visually prior to thermal fatigue resistance testing. Then all restorations were tested for thermal fatigue resistance.

Experience gathered over numerous years has shown that the use of alloys with a CTE between 16,0 – 17,0, measured at 25-600 °C, allows to achieve very good results. However, this does not apply each alloy. In individual cases successful firing performed by VITA Zahnfabrik may differ from the recommendations of the alloy manufacturers.

If you have any questions or problems, please call the VITA Hotline, Tel.: (+49) 7761 / 562-222.

**Any illustrations and written information are without obligation and not binding and do not include any undertaking as to characteristics.**

**This alloy list does not claim to be complete.**

After the publication of this survey any previous versions become obsolete.

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