

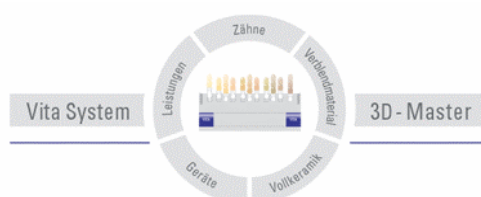
Survey of alloys tested by VITA in combination with VITA VM 13

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

Alloy name	Manufacturer	CTE [$10^{-6} \cdot K^{-1}$] * (25-500 °C) / (25-600 °C)	Cooling	
			**	*
Argedent 52	Argen Corp.	14.2 / 14.4	S	N
Argedent 52 SF	Argen Corp.	13.9 / 14.1	N	F
Argedent 65 SF	Argen Corp.	14.7 / 15.0	S	N
Argedent 90	Argen Corp.	14.7 / 15.0	S	S
Argedent Bio Yellow PF	Argen Corp.	14.3 / 14.5	S	N
Argedent Euro	Argen Corp.	14.1 / 14.4	N	N
Argedent Yellow 2	Argen Corp.	14.3 / 14.5	N	N
Argelite 55	Argen Corp.	14.8 / 15.0	S	S
Argelite 80SF+	Argen Corp.	14.1 / 14.3	N	N
Bio PontoStar XL	Bego	14.2 / 14.4	S	N
Wirobond C	Bego	14.0 / 14.2	S	S
Wiron 99	Bego	13.8 / 14.0	S	N
Wirocer Plus	Bego	13,8 / 14,0	N	N
Wirobond 280	Bego	14,0 / 14,2	L	N
Esteticor Biennor CF	Cendres & Métaux SA	13.8 / 14.2	N	N
Esteticor Lumina PF	Cendres & Métaux SA	14.2 / 14.6	N	N
Degudent U	DeguDent	13.8 / 14.0	N	N

* according to the information of the alloy manufacturers

** based on sample tests performed by VITA



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Alloy name	Manufacturer	CTE [$10^{-6} \cdot K^{-1}$] * (25-500 °C) / (25-600 °C)	Cooling	
			**	*
Remanium 2000+	Dentaurum	14,0 / --	L	L
Remanium Star	Dentaurum	14,1 / --	L	L
Remanium CS	Dentaurum	14.0 / --	N	N
Remanium CSe	Dentaurum	14.0 / --	N	N
Remanium Secura	Dentaurum	14.4 / --	N	S
Orplid Keramik 3	Hafner	14.3 / 14.5	N	S
Orplid Keramik 4	Hafner	14.1 / 14.3	N	N
Pangold Keramik N2	Hafner	14. 1 / 14.2	N	N
Magnum Nitens	Mesa	14.5 / 14.7	S	N/S***
V-Classic	metalordental	14.1 / 14.4	N	N
V-DeltaIoy	metalordental	14.3 / 14.5	S	N
V-Delta Spezial	metalordental	14.5 / 14.7	S	S
V-Gnathos Plus	metalordental	14.3 / 14.6	S	S
G75	Puppo lori	14.4 / 14.7	S	--
Oralium Ceramic	SAFINA	14,0 / 14,2	L	--

* according to the information of the alloy manufacturers

** based on sample tests performed by VITA

*** information of the alloy manufacturer must be adhered to

Cooling: F = fast 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 13 and the alloys listed in the survey and for any damage resulting from lack of suitability of the alloy for processing with VITA VM 13 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 13 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 13 with one of the alloys listed in this survey, the user must verify the suitability of the alloy for processing with VITA VM 13!

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 13. 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 14 - 14.4, measured at 25-600 °C, allows to achieve very good results. If the CTE value of the alloy is higher, the temperature range between 900 °C to 700 °C must not be passed in less than three minutes during the cooling phase. 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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