

		Dental alloys for the conventional technique (ISO 22674)					Dental alloys for metal-ceramic (ISO 22674 + ISO 9693-1)	
		Aurix L	Aurix L60	Aurosa	Palargen L	Argenpal IV A	Safibond Bio	Safibond
Trade form		wafers/wire	wafers	wafers	wafers	wafers	wafers	wafers
Colour		yellow	yellow	white	white	white	white	white
Type		4	4	4	3	4	4	4
Indication		B,D,E,F,G	B,D,E,F,G	B,D,E,F,G	B,D,E,G	B,D,E,F,G	D,E,I	D,E,F,I
$\alpha(80 - 600\text{ °C})^*$ (K <sup>-1</sup> )		-	-	-	-	-	$14,1 \times 10^{-6}$	$14,5 \times 10^{-6}$
Composition – weight % (x contents less than 1 %)	Au	65,1	54,5	20,0	-	5,0	77,6	x
	Ag	20,0	26,0	44,8	57,4	59,9	2,0	27,4
	Pd	3,0	5,0	20,0	40,0	22,5	-	60,0
	Pt	1,3	x	-	-	-	18,0	-
	Cu	9,6	12,0	14,4	-	10,0	-	-
	Sn	-	-	-	x	x	-	7,0
	Zn	1,0	2,0	x	2,1	2,0	1,8	x
	other	-	Rh	-	-	Ir	Ti,Ir	In 4,0;Ga 1,0; Ru
Density (g/cm <sup>3</sup> )		14,7	13,8	11,5	10,9	11,2	18,5	10,9
Melting range (°C)		905 – 940	870 – 920	953 – 1 009	1 175 – 1 250	965 – 1 035	1 050 – 1 180	1 130 – 1 300
Casting temp. (°C)		1 020	1 020	1 100	1 400	1 140	1 330	1 400
Crucible		ceramic/graphite	ceramic	ceramic	ceramic	ceramic	ceramic/graphite	ceramic
Soft annealing	temp. (°C)	700	700	700	-	850	-	-
	time (min)	15	15	15	-	15	-	-
Hardening	temp. (°C)	400	400	450	500	500	500	600
	time (min)	30	20	20	30	20	15	30
Proof stress Rp 0,2 (MPa)	soft	310	405	450	245	340	510	490
	hardened	600	780	610	400	690	560	570
Elongation A (%)	soft	30	22	10	20	20	4	12
	hardened	4	5	4	17	6	3	4
Hardness HVS	soft	120	170	157	105	165	200	195
	hardened	225	225	200	185	275	220	265

Solder	Composition – weight %									
	Au	Ag	Pd	Pt	Cu	Sn	Zn	Mn	Ni	other
<b>Palargen M 2</b>	25,0	47,0	1,0	–	25,0	–	2,0	–	–	–
<b>Aurix M</b>	65,1	15,5	3,0	1,3	3,1	2,0	10,0	–	–	–

Material		Alloys for dental amalgam (ISO 1559)					
		Safargam NG2	Safargam NG2	Safargam Plus	Safargam Plus	Safargam Dentis 60	Hg (dental mercury)
Trade form		capsule	powder	capsule	powder	capsule	bottle (250,500 g)
Package		50pcs	250;500;1000g	50pcs	250;500;1000g	50pcs	–
Safargam/Hg (mg) ratio		350mg/400mg	–	350mg/400mg	–	350mg/400mg	–
		525mg/600mg	–	525mg/600mg	–	540mg/600mg	–
		700mg/800mg	–	700mg/800mg	–	720mg/800mg	–
Composition – weight %  (x contents less than 1 %)	Ag	42,0	42,0	50,0	50,0	60,0	–
	Sn	32,0	32,0	30,0	30,0	22,0	–
	Cu	26,0	26,0	20,0	20,0	18,0	–
	other	–	–	–	–	–	Hg
Ratio		1:1,1	1:1,1	1:1,1	1:1,1	1:1,1	–
Creep		0,2	0,2	0,3	0,3	0,3	–
Comp. strength (MPa)	after 1 h	100	100	100	100	130	–
	after 24 h	350	350	400	400	450	–
Dimensional change (%)		-0,07+ 0,015	-0,07+ 0,015	-0,05+ 0,05	-0,05+ 0,05	-0,05+ 0,05	–

		Dental base metal casting alloys (ISO 6871)	Dental base metal alloys for metaloceramic (ISO 9693)
		<b>Oralium</b> <sup>1)</sup>	<b>Oralium Ceramic</b>
Trade form		wafers	wafers
Colour		white	white
Type		4	3
Indication		H	D,E,F,I
$\alpha(25 - 500 \text{ }^\circ\text{C})^*$	(K <sup>-1</sup> )	–	14,0 × 10 <sup>-6</sup>
Composition – weight% (x contents less than 1%)	Cr	28,5	26,0
	Co	63,5	61,0
	Mo	5,8	6,0
	Ni	–	–
	Mn	x	x
	Si	x	1,2
	Fe	x	x
	other	C	W 5,0
Density	(g/cm <sup>3</sup> )	8,4	8,5
Melting range	(°C)	1 390 – 1 420	1 320 – 1 335
Casting temp.	(°C)	1 470	1 470
Crucible		ceramic	ceramic
Soft annealing	temp. (°C)	–	–
	time (min)	–	–
Hardening	temp. (°C)	–	–
	time (min)	–	–
Proof stress Rp 0,2 (MPa)	soft	700	460
	hardened	not age-hardenable	not age-hardenable
Elongation A (%)	soft	6	5
	hardened	not age-hardenable	not age-hardenable
Hardness HVS	soft	350	360
	hardened	not age-hardenable	not age-hardenable

\* coefficient of linear thermal expansion

## Indication

- A – single and double-land inlays
- B – three-land inlays (MOD), onlays
- C – root inlays
- D – separate crowns
- E – short bridges (3-4 units)
- F – large bridges
- G – milled works
- H – construction and removable replacement parts
- I – metal-ceramic crowns and bridges

## Type

- 1 – low-strength alloys (soft)
- 2 – medium-strength alloys (medium-hard)
- 3 – high-strength alloys (hard)
- 4 – extra-high strength alloys (extra hard)

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