

Processing instructions:

Mixing of different solders or solders of similar types is not allowed!

Wear darkened eye protection and protective gloves when soldering.

Protect, hands and breathing during pickling.

While working with rotating instruments, wear safety glasses, gloves and a dust mask and use an aspiration device.

Upon publication, these instructions for use supersede all previous editions.

The manufacturer is not liable for any damages due to the user disregarding the instructions for use below.

Indication

Precious metal solders are used for connecting precious metal alloys. When soldering, the parts to be connected are heated so much that the solder can flow into the solder joint. The solidus of the alloy must be higher than the liquidus of the solder. For porcelain fused to metal alloys, there are solders before and after the ceramic bond. Pre-solders do not melt during ceramic firing. The highest firing temperature must therefore be below the solidus of the solder. Conversely, a solder used after the ceramic bond should not harm the ceramic during the ceramic firing. The liquidus of these solders should be lower than the lowest firing temperatures of ceramics.

General guidelines for dental solders

Traceability of lot numbers

If different lots of a solder are being used for the realisation of a restoration, all lot numbers concerned must be noted in order to assure traceability.

Choosing the correct solder

The elements to be soldered have to remain in the solid state during the process of soldering. Therefore, it is imperative that the liquidus point of the respective solder is below the solidus point of the alloy to be soldered.

Soldering flux

In order to avoid a premature oxidation of the surfaces to be soldered it is recommended to cover them completely with a soldering flux before any heat treatment.

The following soldering flux can be used for the soldering of precious metal alloys:

1. **CM soldering paste/Fluxor**, specially for flame-soldering at elevated temperature ranges.
2. **Flux C/V-Flux**, a liquid flux developed for soldering in a ceramic furnace.

Soldering investments

The Cendres+Métaux **soldering investment** is specified for the fixation of the elements to be soldered. To achieve a precise fit of the soldered work it is advisable to follow the instructions for use of the respective manufacturer of soldering investments.

Preparation of the surfaces to be soldered

For any type of soldering, a soldering gap of 0.05–0.20 mm will be most appropriate. This ensures that the liquid solder will be aspirated into the soldering gap by capillary force. If the soldering gap is larger than 0.2 mm, it is recommended to place a piece of the same alloy to be soldered into the soldering gap in order to reinforce the soldered connection. The surfaces of the soldering areas should measure at least 6–9 mm² for sufficient stability. In addition, these surfaces should be larger in the vertical than in the horizontal sense for better resistance to masticatory forces.

Rx only

The products carry the CE sign.
See packaging for details.

Porous soldering joint

After finishing and polishing of the restoration, the solder has to present a surface free of any cavities or porosities to avoid being a source of corrosion.

Benchcooling of the soldered work

Do not quench neither the soldering blocks nor free-hand soldered restorations, but benchcool to room temperature. Oxides arising on high gold metal alloys and high precious metal alloys can be eliminated by pickling in a warm and freshly prepared (clean) solution of 10 vol.-% sulphuric acid (H₂SO₄). Oxides arising on palladium-based alloys can be eliminated by sandblasting.

Note: When using other pickling agents follow the instructions for use of the respective manufacturer.

Disinfection

This product is delivered non-sterile.

Each prosthetic restoration must be cleaned and disinfected before try-in or definite insertion in the mouth of the patient.

Measure of precaution

on processing precious metal alloys, soldering and casting-on are included in the Cendres+ Métaux Dental documentation and in the website www.cmsa.ch/dental.

Warning: The solders **S.W 925** and **S.W 870** for soldering non-precious metal alloys contain Nickle (Ni) and show allergic potential.

Allergies (contraindication)

With patients having an existing allergy to one or several elements contained in an alloy, this particular alloy must not be used. With patients suspected of having an allergy to one or several elements contained in an alloy, this alloy can only be used after preliminary allergological testing and proof of a non-existing allergy.

Physical properties

Solders	Order No. Strip brazing material in rolls	5 Rods Ø 0.8mm, length 200 mm	Indications			Colour	Au- + Pt-Met.	Composition in weight %									
			Flame soldering precious metal alloys	Soldering in the ceramic furnace for precious metal alloys	Flame soldering non-precious metal alloys			Au	Pt	Pd	Ag	Cu	Zn	Sn	In	Ir	Others
S.G 700	010920	010875	✓	✓		Yellow	72.90	72.40	0.45		10.20	2.90	12.00		2.00	0.05	
S.G 750	010894	010895	✓	✓		Yellow	76.10	75.10	1.00		11.75		12.15				
S.G 810	010917	010916	✓	✓		Yellow	76.10	75.10	1.00		14.50		9.40				
S.G 880	010919	010878	✓			Yellow	78.90	75.90	2.90		10.20	5.90	5.00			0.10	
S.G 920	010975	010974	✓			Yellow	89.10	88.10	0.90		3.00	5.10	2.80			0.10	
S.G 975	011002	011003	✓			Yellow	93.75	93.50	0.20		0.50	4.45	1.20			0.05	Fe0.10
S.G 1030	010823	010822	✓			Yellow	85.50	85.00	0.45		13.50		1.00			0.05	
S.G 1055	010887	010888	✓			Yellow	82.40	80.00	2.40		16.90		0.70				
S.G 1080	010820	010819	✓			Bright Yellow	83.00	80.00	3.00		17.00						
S.G 1120	01050046	01050030	✓			Pale Yellow	80.10	75.10		5.00	18.90			1.00			
S.G 1155	-	010826	✓			Pale Yellow	78.00	64.50	5.00	8.50	20.00		2.00				
S.W 870	010846	010845			✓	White	80.00	80.00					9.50				Ni10.50
S.W 925	010843	010842			✓	White	76.50	76.50				3.00	5.00				Ni13.50, Mn2.00
S.W 1100	010911	010918	✓			White	80.50	72.50		7.90	14.50	4.00			1.00	0.10	
S.W 1125	01050045	01050031	✓			White	95.50	85.00		10.50			4.50				

ISO 9333 Dental brazing materials/Metallic materials

Particular instructions for use

Solders	Solder shapes		Melting range °C	Recommended temperatures when soldering in ceramic furnaces °C	Recommended flux
	Strip solder in rolls	Rods L 200 mm Ø 0.8 mm			
S.G 700	✓	✓	645–700	760 (T _L + 60 °C)	* / **
S.G 750	✓	✓	695–750	810 (T _L + 60 °C)	* / **
S.G 810	✓	✓	750–810	870 (T _L + 60 °C)	* / **
S.G 880	✓	✓	835–880	940 (T _L + 60 °C)	* / **
S.G 920	✓	✓	880–920	980 (T _L + 60 °C)	* / **
S.G 975	✓	✓	935–975		*
S.G 1030	✓	✓	990–1030		* / **
S.G 1055	✓	✓	1020–1055		*
S.G 1080	✓	✓	1060–1080		*
S.G 1120	✓	✓	1040–1120		*
S.G 1155		✓	1060–1155		* / ***
S.W 870	✓	✓	820–870		***
S.W 925	✓	✓	880–925		***
S.W 1100	✓	✓	1010–1100		*
S.W 1125	✓	✓	1005–1125		*

Auxiliary materials for soldering

	Flux	Recommended range of use	Temperature range	Recommended mixtures for flames
*	CM soldering paste / Fluxor	Flame soldering for precious metal alloys	600–1160 °C	Mixture: Propane / Oxygen or natural gas / compressed air
**	Flux C / V-Flux	Soldering in a ceramic furnace after firings	600–1000 °C	
***	Soldering flux for non precious metal alloys / Solflux	Flame soldering of non precious metal alloys with precious metal alloys		

Cendres+Métaux solders corresponding to Cendres+Métaux alloys

Important: The use of solder/alloy combination not listed is subject to the user's risk!

Alloys	Before firing		After firing		Alloys	Before firing		After firing	
Ceramic alloys									
Ceradelta®	S.G 1120		S.G 750		V-Gnathos® PF	S.G 1030		S.G 750	
Ceradelta® 2	S.G 1120		S.G 750		V-Gnathos® Plus	S.G 1030		S.G 750	
Cerafit	S.W 1100		S.G 750		V-Gnathos® Supra	S.G 1030		S.G 750	
Cerapall® 2	S.W 1125	S.G 1080	S.G 750		V-Supragold	S.G 1080		S.G 750	
Cerapall® 6	S.W 1125	S.G 1120	S.G 750		V 92	S.W 1100		S.G 750	
Estetico® Actual	S.W 1100		S.G 810	S.G 750	Unique	S.G 975		S.G 750	
Estetico® Avenir®	S.G 1030		S.G 810	S.G 750	Ceramic alloys for dental restorative systems on implants				
Estetico® Biennor CF®	S.G 1055				Estetico® Implant® 32	S.G 1055	S.G 1030	S.G 750	
Estetico® Blancor	S.W 1100		S.G 750		Estetico® Implant® 58	S.G 1055	S.G 1030	S.G 750	
Estetico® Cosmor H	S.G 1080		S.G 810	S.G 750	Estetico® Implant® 76	S.G 1055	S.G 1030	S.G 750	
Estetico® Economic	S.G 1080		S.G 810	S.G 750	Implantalloy 1	S.G 1030		S.G 750	
Estetico® Focus®	S.G 1080		S.G 810	S.G 750	Implantalloy 2	S.W 1125	S.G 1120	S.G 750	
Estetico® Helvetica®	S.G 1030		S.G 810	S.G 750	Casting alloys for dental restorative systems on implants				
Estetico® Ideal H®	S.G 1030		S.G 810	S.G 750	Implantalloy 3	S.G 810	S.G 750		
Estetico® Lumina PF®	S.G 975	S.G 1030		S.G 750	Universal alloys				
Estetico® NewStart®	S.W 1100		S.G 810	S.G 750	Aurofluid® Plus	S.G 880		S.G 700	
Estetico® N2	S.W 1100		S.G 810	S.G 750	BioEthic®	S.G 1030		S.G 810	S.G 750
Estetico® Opal	S.G 1080		S.G 810	S.G 750	DGVO8 H	S.G 880		S.G 700	
Estetico® Plus	S.W 1100		S.G 810	S.G 750	Estetico® Concorde®	S.G 880		S.G 700	
Estetico® Prema H®	S.G 975		S.G 750		Estetico® Ecologic	S.G 920		S.G 700	
Estetico® Prestige	S.G 1080		S.G 810	S.G 750	Estetico® Pal	S.G 920		S.G 700	
Estetico® Prisma®	S.W 1100		S.G 810	S.G 750	Pontor® 4 CF	S.G 880		S.G 700	
Estetico® Royal H	S.G 1055		S.G 810	S.G 750	StyleFluid CF	S.G 880		S.G 700	
Estetico® SN	S.G 1080		S.G 810	S.G 750					
Estetico® Special	S.G 1080		S.G 810	S.G 750					
Estetico® Unic	S.G 1080		S.G 810	S.G 750					
V-Classic	S.W 1125		S.G 750						
V-Delta® 450	S.W 1125		S.G 750						
V-Delta® SF	S.W 1125	S.G 1120	S.G 750						
V-Delta® Special	S.W 1100		S.G 750						
V-Deltaloy	S.W 1100	S.G 1080	S.G 750						

Alloys

Solders for casting and bonding alloys

Casting alloys

1 Star	S.G 750	S.G 700		
Aurofluid® 2 PF	S.G 810	S.G 750		
Aurofluid® 3	S.G 810	S.G 750		
Dentalor® 60	S.G 810	S.G 750		
Medior® 3	S.G 810	S.G 750		
Modulor® 3	S.G 810	S.G 750		
Neocast® 3	S.G 810	S.G 750		
Novopal® 3	S.G 810	S.G 750		
Opticast®	S.G 810	S.G 750		
Pagalin® 2	S.G 880	S.G 750		
Pagalinor® 2	S.G 810	S.G 750		
Pallorag® 33	S.G 810	S.G 750		
Pallorag® 35	S.G 810	S.G 750		
Pontor® 2	S.G 810	S.G 750		
Pontor® MPF	S.G 810	S.G 750		
Protor® 2	S.G 810	S.G 750		
Protor® 3	S.G 810	S.G 750		
Solaro® 3	S.G 810	S.G 750		
Solaro® Special	S.G 810	S.G 750		
Strator 3	S.G 810	S.G 750		
Yellow Special	S.G 750	S.G 700		