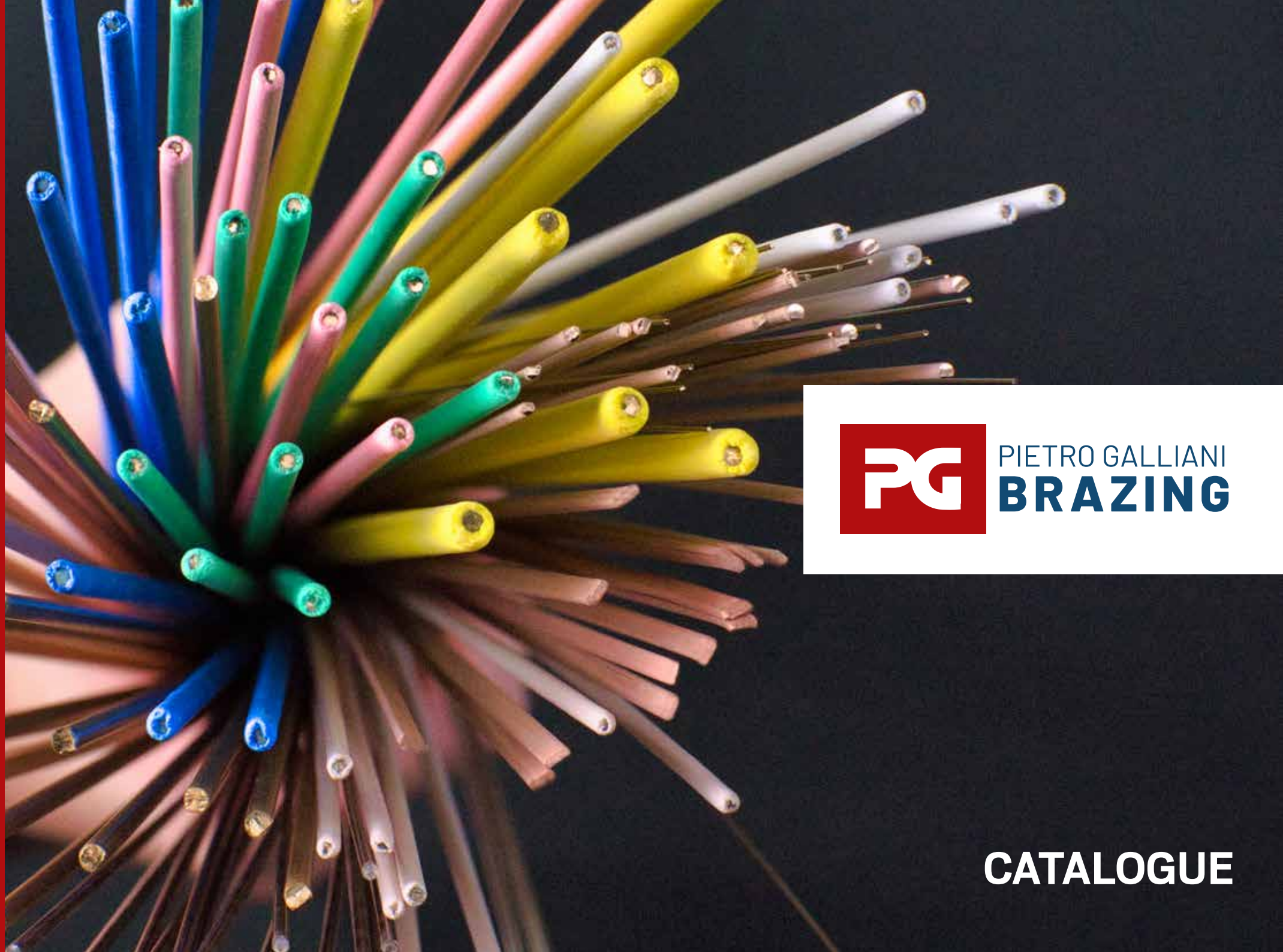

PIETRO GALLIANI
BRAZING

CATALOGUE

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WELCOME TO PIETRO GALLIANI BRAZING

OVER 100 YEARS OF EXPERIENCE IN THE CREATION OF BRAZING ALLOYS

More than 1000 products made completely in Italy

RESEARCH AND INNOVATION 100% MADE IN ITALY AT THE SERVICE OF HIGH-TECH

PIETRO GALLIANI BRAZING S.p.A. is the largest European manufacturer of brazing alloys, with over 100 years of experience in the production of high quality products.
We have a **selection of products able to satisfy every specific need in the world of brazing**, with our **wide range** of **alloys** in the form of: **bare and coated rods, wires, sheets, rings, preforms** and paste or doseable flux powders. The continuous search for new products and solutions for our clients is a fundamental part of our DNA.

We are an international company with a local approach.
Thanks to our widespread distribution network and local partnerships in many countries, we are able to guarantee the best service in all the world.

OUR HISTORY

PIETRO GALLIANI BRAZING S.p.A. has been operating in the **metallurgical sector** for over 100 years.

Since 1995 it has distinguished itself as a European leader in the **production of materials for brazing**, made 100% in the factories located in Vergato, at about 50 kilometres south of Bologna.

Through **continuous R&D activity** and constant **attention to product quality**, we are able to supply our clients with all the main alloys and fluxes used in the world of brazing, at the same time, **developing, producing and promoting all the related products and services**

PIETRO GALLIANI BRAZING

Italia
CERTIFIED
ISO 9001 & ISO 14001

OUR MISSION

Our goal is to create a partnership with our clients and support them in **optimising their production processes.**

La PIETRO GALLIANI BRAZING S.p.A. is **certified** UNI EN ISO 9001:2015 e UNI EN ISO 14001:2015.

Our products respect the norms AWS A5.8, EN 1044, EN 17672:2016, DIN 8513, BS 1845, NF A081-362, AS/NZS 1167.1:2005.

All **production batches** are systematically controlled to certify their **conformity and metallurgical purity,** as well **as their mechanical characteristics.**

SUSTAINABILITY AND TERRITORY

PIETRO GALLIANI BRAZING S.p.A. is situated at the foot of the **Apennines**, on the banks of the Reno river. Being in such **close contact with the territory** makes us even more respectful of the environment that hosts us, and even more committed to **promoting sustainability** in every action we undertake.

We are very committed to our territory and **are convinced that only with the added value** of **highly specialised personnel** and cutting-edge equipment, you are able to obtain **efficient production**, rapid service and excellent quality.
For this reason we have invested millions of euros in **our factories in Italy, modernising and optimising the production processes and expanding the Research and Development** sector, unlike many of our competitors which have decided to move production to other “low cost” countries.

OUR SERVICES

CUSTOMISED TECHNICAL SUPPORT

Our experts are at your disposal:

- **to find the most effective solutions** to problems that may arise during processing
- **to carry out micrographs and metallographic analyses** of the brazed joint (tolerances, joint design, capillarity)
- **to develop new products**, also in partnership with your R&D department
- **to develop automation** in the production process

PACKAGING DESIGN (CUSTOMISED SOLUTIONS)

We are able to deliver your products ready for sale, creating high quality labels and packaging with your company logo and colours:

- pre-packaged in quantities of your choice
- packaging designed specifically for you or for your clients
- special labelling
- brand design

TRAINING (IN BRAZING TECHNIQUES)

A successful brazing process requires skilled operators and the correct techniques.

Operator training helps to prevent and eliminate problems and breakdowns, which would otherwise result in inefficiency and unnecessary expenses. For this reason, we can organise, in your or our company, generic courses on brazing or specific courses for the sector of use or particular applications.

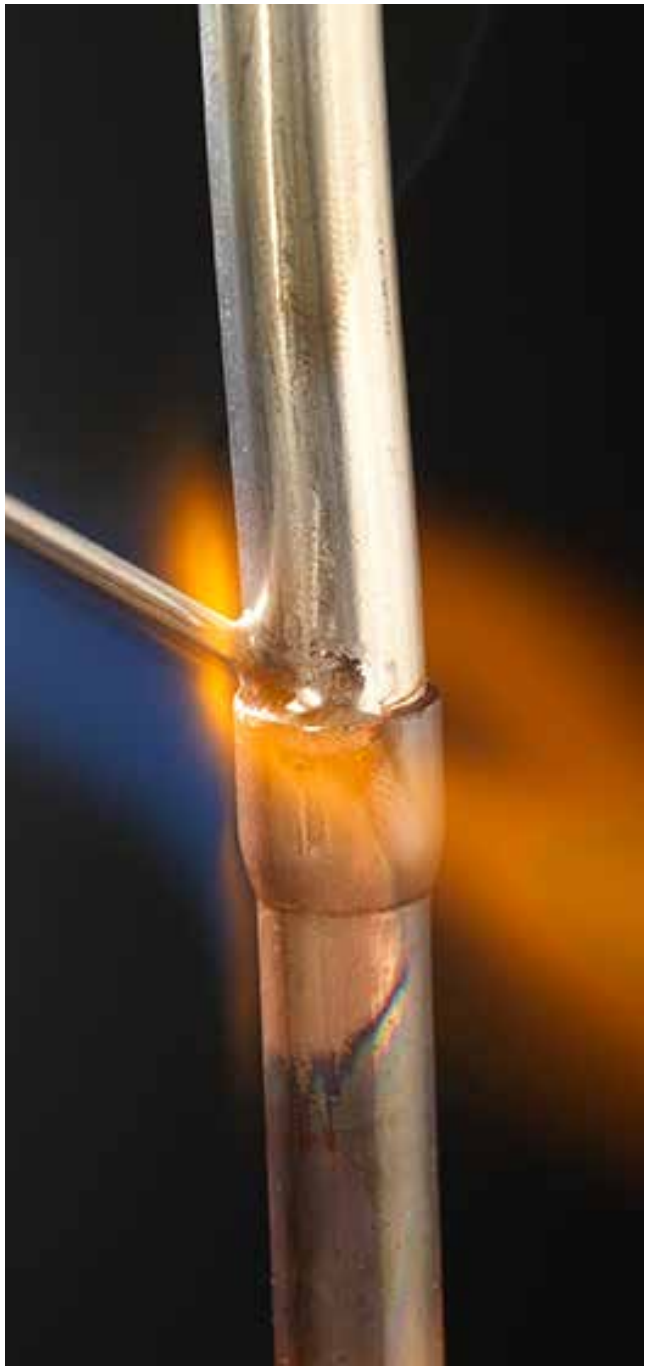
INSTRUCTIONS FOR USE

TECHNICAL INFORMATION

Brazing is a process by which two metal parts are stably joined by the use of a filler material which is brought to fusion through the application of heat, this filler material penetrates in a capillary way between the joints to be united, connecting them definitively.

Brazing, unlike welding, does not unite the two metal parts by melting them, but instead **unites them by melting the filler material**, which by capillarity penetrates the two metal parts **to join them in a stable and permanent way**. The filler material must always have a **lower melting temperature** than the parts to be joined. One of the main advantages of brazing is **the ability to join together homogeneous and heterogeneous materials**. In particular, heterogeneous materials, due to their diverse nature, have different mechanical characteristics, which do not allow the use of fusion by welding, welding which would jeopardise the stability of the joint over time.

The brazing technique is also used in those cases where it is important to maintain **the shape and the aesthetic aspect**, which is better obtained by not welding the joints to be united.
In the world of brazing it is possible to identify two types of brazing, **soft brazing** and **hard brazing**. In soft brazing the brazing temperature is below 450°C and in any case always below the melting point of the materials to be joined. In hard brazing, the brazing temperature is above 450°C but maintained always below the melting point of the materials to be united.



HOW TO CHOOSE THE ALLOY FOR BRAZING

The alloy for the brazing (the so-called **“brazing alloy”**) has to be chosen considering various aspects, including the characteristics of the materials to be joined and their melting point. In fact, the alloy must melt at a lower temperature than the base metals, to avoid deterioration of the other materials involved in the operation. **The field of application of the finished product** is also important, in fact, there are alloys that have a higher resistance to environments particularly subject to corrosion, or alloys that are more suitable for jewellery because of the aesthetic result required.

HOW IS THE JOINT HEATED

The heating method of the joint varies according to the melting temperature of the filler metal. Brazing can be carried out by using a torch, a means similar to that used for typical welding, fueled by acetylene, propane, oxygen, hydrogen or natural gas, or by electric induction or resistance heating (a method used for electronic applications), or in a vacuum oven or in a controlled atmosphere (for higher quality joints).

THE APPLICATION OF THE FLUX

The **flux** plays a **fundamental role** in the brazing process because by **preventing the formation of oxides**, it greatly helps the wettability of the molten alloy, allowing it to flow more smoothly.

An indispensable operation before proceeding with brazing is the **cleaning of the surfaces to be joined**, they must be cleaned of grease and oil using specific solvents or hot water. Furthermore, it is important that in the vicinity of the joint, the pieces do not have any imperfections or burrs (resulting from cutting or previous processes) as these imperfections affect the heating of the piece itself, heating which must be evenly carried out.

The surface oxides are then removed by mechanical brushing, considering that **the choice of flux is as important as that of the alloy.** The working temperature of the flux has to be inside a range that enables its action to be maintained throughout the brazing cycle so as to prevent the formation of new oxides.

At the end of the brazing, the flux residues are normally eliminated by cooling the piece in water.

CADMIUM-FREE SILVER BASED ALLOYS

They are **low temperature brazing** alloys, for general use and suitable for **joining base materials** such as iron, carbon steel, stainless steel, copper, nickel and the alloys of these metals.

Given the **fluidity** and **excellent capillary penetration capacity**, they ensure joints with excellent mechanical characteristics and resistance to pressure and vibrations.

- Fluidity
- Excellent capillary penetration capacity
- Excellent mechanical characteristics

Product	Composition %					Melting Range °C	Oper. Temp °C	Density g/cm³	Tensile Strength N/mm²	International Norms					
	Ag	Cu	Zn	Sn	Other elements					AWS A5.8	EN 1044	DIN 8513	NFA 81-362	BS 1845	EN 17672
GalFlo 05 Si	5	55	39,75	-	Si 0,25	820-870	860	8,4	350	-	AG 208	L-Ag5	-	-	Ag 205
GalFlo 12	12	48	40	-	-	800-830	830	8,5	410	-	AG 207	L-Ag12	-	-	Ag 212
GalFlo 16	16	50	34	-	-	790-830	820	8,6	505	-	-	-	-	-	-
GalFlo 20	20	44	36	-	-	690-810	810	8,7	380	-	AG 206	L-Ag20	-	-	Ag 220
GalFlo 25	25	40	35	-	-	700-790	780	8,8	380	-	AG 205	L-Ag25 *	-	-	Ag 225
GalFlo 25 Sn	25	40	33	2	-	680-760	750	8,7	420	BAg-37	AG 108	L-Ag25Sn	-	-	Ag 125
GalFlo 30	30	38	32	-	-	680-765	750	8,9	380	BAg-20	AG 204	L-Ag30	-	-	Ag 230
GalFlo 30 Sn	30	36	32	2	-	665-755	740	8,8	380	-	AG 107	L-Ag30Sn	-	-	Ag 130
GalFlo 33	33	34	33	-	-	700-740	730	8,9	535	-	-	-	-	AG 21	-
GalFlo 34 Sn	34	36	27,5	2,5	-	630-735	710	9	360	-	AG 106	L-Ag34Sn *	-	-	Ag 134
GalFlo 35	35	32	33	-	-	685-755	740	9	430	BAg-35	-	-	-	-	Ag 235
GalFlo 38 Sn	38	32	28	2	-	650-720	710	8,8	430	BAg-34	-	-	-	-	Ag 138
GalFlo 38 Ni Mn ◆	38	26	25,3	-	Mn 7,2Ni 3,5	680-700	700	8,8	525	-	-	-	-	-	-
GalFlo 40 Ni	40	30	28	-	Ni 2	670-780	780	8,9	350	BAg-4	-	-	-	-	Ag 440
GalFlo 40 Sn	40	30	28	2	-	650-710	690	9,1	430	BAg-28	AG 105	L-Ag40Sn	-	-	Ag 140
GalFlo 43	43	37	20	-	-	690-770	760	9,1	400	-	-	-	-	AG 20	-
GalFlo 44	44	30	26	-	-	675-735	730	9,1	400	-	AG 203	L-Ag44	-	AG 5	Ag 244
GalFlo 45	45	30	25	-	-	660-740	730	9,2	410	BAg-5	-	-	-	-	Ag 245
GalFlo 45 Sn	45	27	25,5	2,5	-	640-680	670	9,2	350	Av. in BAg-36	AG 104	Av. in L-Ag45Sn	-	-	Ag 145
GalFlo 49 Ni Mn	49	16	23	-	Mn 7,5 Ni 4,5	670-690	690	8,9	300	BAg-22	AG 502	L-Ag49	-	AG 18	Ag 449
GalFlo 49 Ni Mn L ◆	49	27,5	20,5	-	Mn 2,5 Ni 0,5	670-690	690	8,9	300	-	-	-	-	-	-
GalFlo 50 Ni ◆	50	20	28	-	Ni 2	660-705	670	9	450	BAg-24	-	-	-	-	Ag 450
GalFlo 55 Sn	55	21	22	2	-	630-660	660	9,5	350	-	AG 103	L-Ag55Sn *	-	AG 14	Ag 155
GalFlo 56 Sn	56	22	17	5	-	620-655	650	9,5	350	BAg-7	AG 102	L-Ag55Sn *	-	-	Ag 156
GalFlo 60 Sn	60	23	14	3	-	620-685	680	9,6	420	-	AG 101	L-Ag60Sn	-	-	-
GalFlo 60 A Sn	60	30	-	10	-	600-730	720	9,8	390	BAg-18	AG 402	-	60 A1	-	Ag 160
GalFlo 65	65	20	15	-	-	670-720	710	9,6	400	BAg-9	-	-	-	-	Ag 265
GalFlo 72	72	28	-	-	-	780	780	10	390	BAg-8	AG 401	-	72 A1	AG 7	Ag 272

◆ Available in Tri-Tech

* Equivalent

COPPER PHOSPHORUS AND COPPER PHOSPHORUS SILVER ALLOYS

They are successfully and widely used in **sanitary piping systems** because, not containing zinc, they do not incur the risk of "dezincification".
The presence of **phosphorus** greatly helps to reduce the formation of oxides during the heating and brazing process.
The addition of **silver**, in addition to phosphorus, guarantees a better mechanical resistance of the joint (especially in tensile stress), these alloys cause a slight loss of wettability during brazing. Brazing of these alloys is carried out through rapid heating with a torch thanks to their high thermal conductivity.

The use of **copper alloys** is also possible for materials such as brass and bronze, taking care to use/apply an appropriate flux.

- No Zinc
- Phosphorus
- + Silver
- + Copper

Product	Composition %				Melting Range °C	Oper. Temp °C	Desnità g/cm³	Tensile Strength N/mm²	International Norms					
	Ag	Cu	P	Other elements					AWS A5.8	EN 1044	DIN 8513	NFA 81-362	BS 1845	EN 17672
GalFlo CuP 6	-	94	6	-	710-890	760	8,1	250	-	CP 203	-	-	-	CuP 179
GalFlo CuP 7	-	93	7	-	710-820	730	8,05	250	-	CP 202	-	-	-	CuP 180
NanoTech CuP 7	-	93	7	-	710-820	730	8,05	250	-	CP 202 *	-	-	-	CuP 180
GalFlo CuP 7,3	-	92,7	7,3	-	710-793	730	8,05	250	BCuP-2	-	-	-	-	CuP 181
GalFlo CuP 7 Sn 7	-	86	7	Sn 7	650-700	690	8	250	-	CP 302	-	-	-	CuP 386
GalFlo CuP Sn Ni	-	85,5	6,5	Sn 7 Ni 1	650-700	690	8	250	-	-	-	-	-	-
GalFlo CuP 8	-	92	8	-	710-770	720	8	250	-	CP 201	L-CuP8 *	-	-	CuP 182
NanoTech CuP 8	-	92	8	-	710-770	720	8	250	-	CP 201	L-CuP8 *	-	-	CuP 182
GalFlo CuPAg 0,4	0,4	93,6	6	-	710-740	710	8,1	250	-	-	-	-	-	-
GalFlo CuPAg 1	1	92,5	6,5	-	645-810	710	8,1	250	-	-	-	CuP278	-	-
NanoTech CuPAg 1	1	92,5	6,5	-	645-810	710	8,1	250	-	-	-	CuP278	-	-
GalFlo CuPAg 2 AWS	2	91	7	-	643-788	740	8,1	250	BCuP-6	-	-	-	CP 2 *	CuP 280
GalFlo CuPAg 2	2	91,7	6,3	-	645-825	740	8,1	250	-	CP 105	L-Ag2P *	-	-	CuP 279
NanoTech CuPAg 2	2	91,2	6,8	-	645-825	740	8,1	250	-	-	-	-	-	-
NanoTech CuPAg 2 EN 17672	2	91,7	6,3	-	645-825	740	8,1	250	-	CP 105	L-Ag2P *	-	-	CuP 279
GalFlo CuPAg 5 EN 17672	5	88,2	6,8	-	643-771	710	8,2	250	BCuP-7	-	-	-	-	CuP 282
GalFlo CuPAg 5 AP	5	88,2	6,8	-	643-771	710	8,2	250	-	-	-	-	-	-
GalFlo CuPAg 5 EN 17672	5	89	6	-	645-815	710	8,2	250	BCuP-3	-	-	-	-	CuP 281
CuPAg 5 BP	5	89	6	-	645-815	710	8,2	250	-	CP 104	-	-	CP 4	CuP 281[a]
NanoTech CuPAg 5	5	89	6	-	645-815	710	8,2	250	-	CP 104 *	-	-	CP 4	CuP 281[a]
GalFlo CuP Ag 6	6	87	7	-	645-690	680	8,2	250	BCuP-4	-	-	-	-	CuP 283
GalFlo CuPAg 6 Ni	6	86,9	7	Ni 0,1	645-725	700	8,2	250	-	CP 103	-	CuP291	-	CuP 283[a]
GalFlo CuPAg 15	15	80	5	-	645-800	700	8,4	250	BCuP-5	CP 102	-	-	CP 1 *	Cup 284
NanoTech CuPAg 15	15	80	5	-	645-800	700	8,4	250	BCuP-5	CP 102 *	-	-	CP 1 *	CuP284
GalFlo CuPAg 18	18	75	7	-	650-650	650	8,6	250	-	CP 101	-	-	-	CuP 286

* Equivalent

BRASS ALLOYS

Brazing with **brass alloys**, because of its **high atomic-scattering capacity**, is used for the characteristic of being better able to conceal the brazing itself and therefore **improve the aesthetic appearance of the joint**, a joint which is hidden from view.
It is therefore particularly appreciated when making **brass furniture or brass display accessories**.

- Joint aesthetics

Product	Composition %					Solidus -liquidus range	Oper. Temp. °C	Density g/cm³	Tensile Strength N/mm²	International Norms					
	Cu	Zn	Ni	Si	Other elements					AWS A5.8	EN 1044	DIN 8513	NFA 81-362	BS 1845	EN 17672:2010
GalFlo 01	60	39	-	-	Ag 1	890-900	900	8,4	370	-	-	-	-	-	-
GalFlo OT Ni 6	53	40,3	6,3	0,2	Mn 0,2	870-910	910	9	420	-	-	-	-	-	-
GalFlo OT 10	48	41,8	10	0,2	-	890-920	910	8,7	380	-	CU 305	L-CuNi10Zn42	49 C1	CZ 8	Cu 773
GalFlo OT Si	59,5	40,2	-	0,3	-	875-895	900	8,4	370	-	CU 301	L-CuZn40	60 C1	CZ 6	Cu 470[a]
GalFlo OT Si Sn	60	39,35	-	0,3	Sn 0,35	875-895	900	8,4	400	-	CU 302	-	-	-	-
GalFlo OT Si Sn Mn	59	39,25	-	0,15	Mn 0,8 Sn 0,8	870-900	890	8,4	380	-	-	L-CuZn39Sn	60 C2	CZ 7A	-
GalFlo OT Si Sn Mn Ni	58	40,05	0,5	0,15	Mn 0,35 Sn 0,95	870-900	900	8,4	400	-	-	-	-	-	Cu 680

ALUMINIUM ALLOYS

These alloys are suitable for **brazing aluminum with other materials**. They find their main application in the sectors of refrigeration and **air-conditioning**, **automotive** and the **hobby sector**.

Aluminium brazing

Product	Composition %				Melting range °C	Oper. Temp. °C	Density g/cm³	Tensile Strength N/mm²	International Norms					
	Al	Si	Zn	Ag					AWS A5.8	EN 1044	ISO 3677	NFA 81-363	BS 1845	EN 17672
GalFlo AlSi 5	95	5	-	-	575-630	590	2,7	105	BAlSi-5	AL 101	B-Al95Si-575/630	-	B/SB AL95Si	Al 105
GalFlo AlSi 12	88	12	-	-	575-585	580	2,65	125	BAlSi-12	AL 104	B-A88Si-575/585	-	B/SB AL88Si	Al 112
GalFlo ZnAl 2	2	-	98	-	375-388	380	7,04	288-335	-	-	-	-	-	-
GalFlo ZnAl 22	22	-	78	-	440-470	450	6,47	255-310	-	-	-	-	-	-
GalFlo ZnAlAg 4	17	-	79	4	440-470	450	6,47	290-345	-	-	-	-	-	-

TRIFOILS

TRI-TECH

Tri-Tech is the ideal product for the **brazing of hard metals**, especially when brazing the teeth of saws. Tri-Tech is produced by the coupling of **two sheets of silver alloys with a copper sheet in the centre**, which thanks to particular technology and a specific very high pressure lamination, permits the coupling of the three sheets until a single layer is obtained.

The final product allows the brazing of hard metals which satisfies all the requirements of sealing and mechanical and shock resistance needed, characteristics essential for the applications for which the tool is intended.

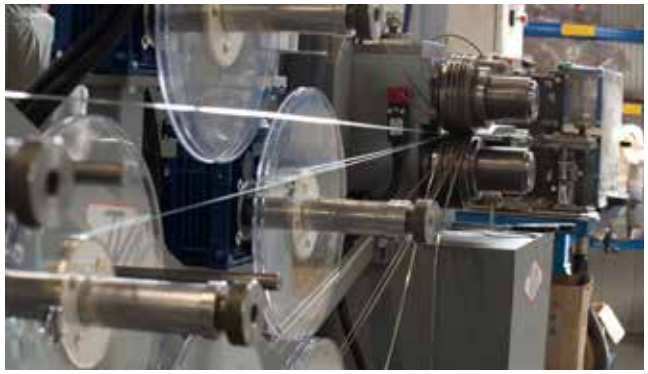
Standard ratio 1:2:1

Product	Composition %					Melting range °C	Oper. Temp. °C	Density g/cm³	Tensile Strength N/mm²	International Norms					
	Ag	Cu	Zn	Sn	Other elements					AWS A5.8	EN 1044	DIN 8513	NFA 81-362	BS 1845	EN 17672
Tri-Tech 38 Ni Mn	38	26	25,3	-	Mn 7,2 Ni 3,5	680-700	700	8,8	525	-	-	-	-	-	-
Tri-Tech 49 Ni Mn L	49	27,5	20,5	-	Mn 2,5 Ni 0,5	670-690	690	8,9	300	-	-	-	-	-	-
Tri-Tech 50 Ni	50	20	28	-	Ni 2	660-705	690	9	450	BAg-24	-	-	-	-	Ag 450

Product	Activity Range °C	International Norms		Description
		AWS 5.31	EN 1045	
Specific fluxes for Tri-Tech (trimetallic)				
GalFlux Tools Braze PS	600-900	-	FH 12	Flux for high temperature tool brazing - brown paste
GalFlux Tools PS/AF	600-900	-	FH 12	Flux for high temperature tool brazing - brown paste
GalFlux Flux49 PS/AF	600-900	-	FH 12	Flux for high temperature tool brazing - brown paste

FOILS

Pietro Galliani Brazing supplies the main brazing alloys also in the form of foils, according to the dimensional specifications required by the client. Here are some of the main alloys used.



Joint aesthetics

Product	Composition %					Melting range °C	Oper. Temp. °C	Density g/cm³	Tensile Strength N/mm²	International Norms					
	Ag	Cu	Zn	Sn	Other elements					AWS A5.8	EN 1044	DIN 8513	NFA 81-362	BS 1845	EN 17672
GalFlo 20	20	44	36	-	-	690-810	810	8,7	380	-	AG 206	L-Ag20	-	-	Ag 220
GalFlo 30 Sn	30	36	32	2	-	665-755	740	8,8	380	-	AG 107	L-Ag30Sn	-	AG 21	Ag 130
GalFlo 38 Ni Mn	38	26	25,3	-	Mn 7,2 Ni 3,5	680-700	700	8,8	525	-	-	-	-	-	-
GalFlo 40 Ni	40	30	28	0,3	Ni 2	670-780	780	8,9	350	BAg-4	-	-	-	-	Ag 440
GalFlo 40 Sn	40	30	28	2	-	650-710	690	9,1	430	BAg-28	AG 105	L-Ag40Sn	-	AG 20	Ag 140
GalFlo 44	44	30	26	-	-	675-735	730	9,1	400	-	AG 203	L-Ag44	-	-	Ag 244
GalFlo 45 Sn	45	27	25,5	2,5	-	640-680	670	9,2	350	Disp. in BAg-36	AG 104	Disp. in L-Ag-45Sn	-	-	Ag 145
GalFlo 49 Ni Mn	49	16	23	-	Mn 7,5 Ni 4,5	670-690	690	8,9	300	BAg-22	AG 502	L-Ag49	-	AG 18	Ag 449
GalFlo 49 Ni Mn L	49	27,5	20,5	-	Mn 2,5 Ni 0,5	670-690	690	8,9	300	-	-	-	-	-	-
GalFlo 50 Ni	50	20	28	-	Ni 2	660-705	690	9	450	BAg-24	-	-	-	-	Ag 450
GalFlo 55 Sn	55	21	22	2	-	630-660	660	9,5	350	-	AG 103	L-Ag55Sn *	-	AG 14	Ag 155
GalFlo 56 Sn	56	22	17	5	-	620-655	650	9,5	350	-	AG 102	L-Ag55Sn *	-	-	Ag 156

Product	Composition %				Melting range °C	Oper. Temp. °C	Density g/cm³	Tensile Strength N/mm²	International Norms					
	Ag	Cu	P	Other elements					AWS A5.8	EN 1044	DIN 8513	NFA 81-362	BS 1845	EN 17672
GalFlo CuPAg 15	15	80	5	-	645-800	700	8,4	250	BCuP-5	CP 102	-	-	CP 1 *	CuP 284

* Equivalent

FLUXES

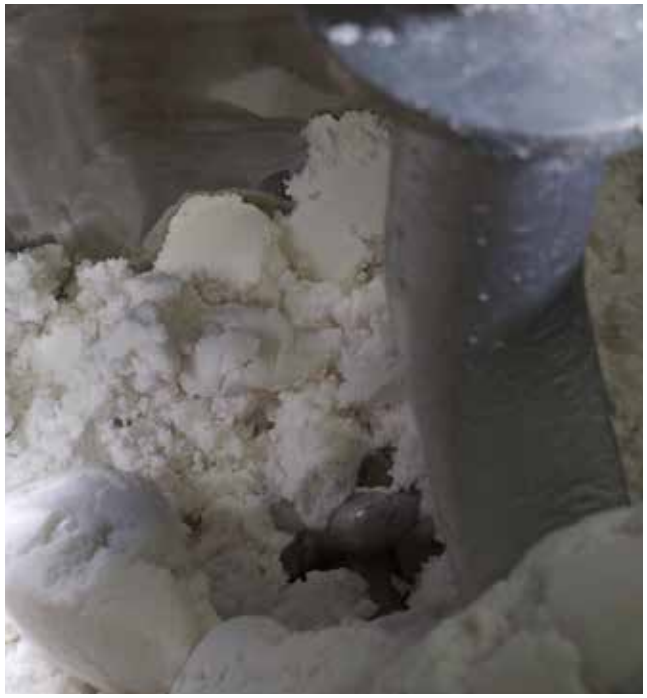
The function of the flux is to **eliminate any oxides present** on the base material and on the filler material, improving wettability and protecting the brazing from any subsequent oxidation.

When choosing the flux, many factors have to be evaluated, such as:

- the types of material to be brazed
- the temperature range at which the brazing will be carried out
- the final appearance of the brazing
- easy removal of residues

From our **wide range of fluxes**, you will be able to choose the most suitable product for your needs.

■ GasFlux is available in different concentrations



Product	Activity Range °C	International Norms		Descrpition
		AWS 5.31	EN 1045	
Standard fluxes				
GalFlux XLT PW/PS/AF	450-800	FB3-F	FH 10	Standard low temperature flux
GalFlux SHT PW/PS/AF	550-800	FB3-F	FH 10	Standard medium temperature flux
GalFlux S PLUS PW/PS	500-800	FB3-F	FH 10	Standard medium temperature flux
GalFlux UWR PW/PS	500-800	FB3-F	FH 10	Flux for high temperature tool brazing
GalFlux UW PS/AF	550-800	FB3-F	FH 10	Flux for high temperature tool brazing – white paste
GalFlux UB PS/AF	550-800	FB3-C	FH 12	Flux for high temperature tool brazing – brown paste
GalFlux Bronze PW	800-1000	FB3-J	FH 21	Standard high temperature flux for brass
GalFlux NanoTech PS	450-800	-	FH 10	Special Nanotech flux
CleanTech Series Fluxes				
CleanTech XLT PW/PS/AF	450-800	FB3-F	FH 10	Non toxic low temperature flux
CleanTech SHT PW/PS/AF	450-800	FB3-F	FH 10	Non toxic medium temperature flux
CleanTech XHT PW/PS/AF	500-850	FB3-F	FH 10	Non toxic high temperature flux
CleanTech X85 PS/AF	500-990	FB3-C	FH 10	Non toxic flux for brazing tools – for vending machines – brown paste
CleanTech Bronze PW/PS/AF	800-1000	FB3-J	FH 21	Non toxic high temperature flux for brass
Fluxes for aluminium				
GalFlux AlCor 101 PW/PS/AF	520-660	FB3-C	FL 10	Flux for aluminium – corrosive
GalFlux AlNc 101 PW/PS	570-660	-	FL 20	Flux for aluminium – non corrosive
GalFlux ZnNc 101 PW/PS/AF	430-480	-	FL 20	Flux for aluminium – non corrosive

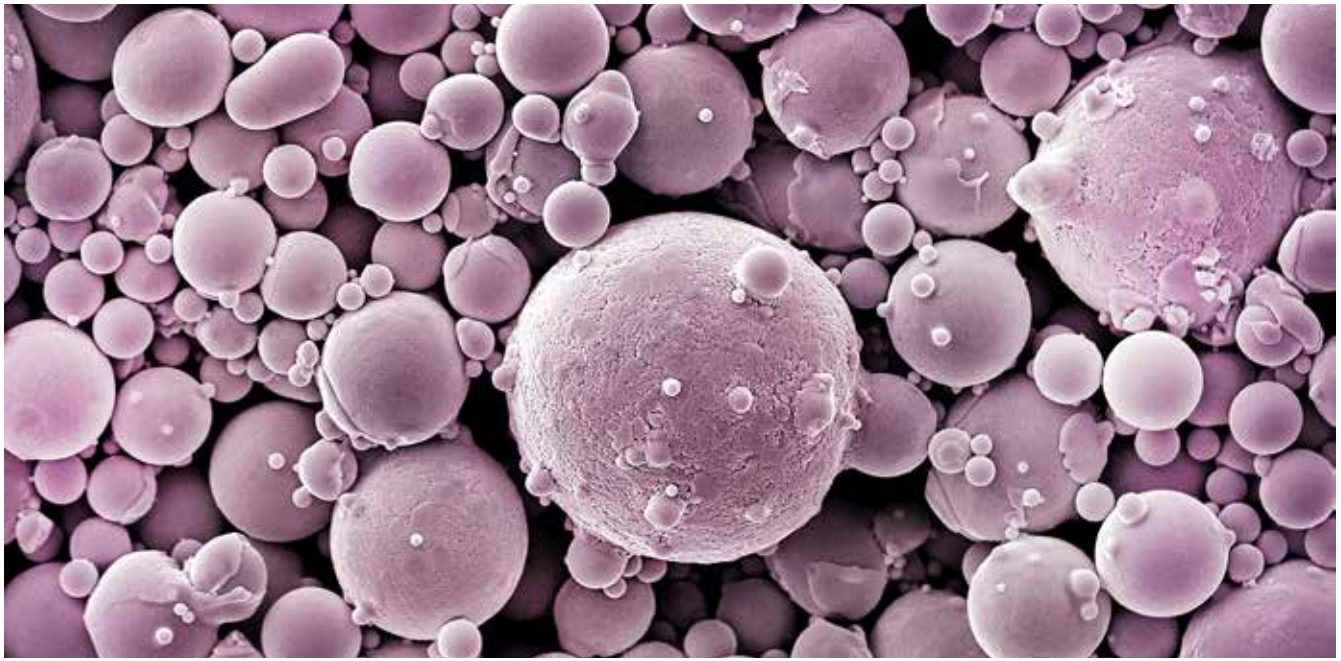
Product	Activity Range °C	Oper. Temp. °C	Descrpition
GasFlux GF "ECO" 88	800-1000	900	Eco high concentration
GasFlux GF "ECO" MEDIUM	800-1000	900	Eco medium concentration
GasFlux GF "ECO" LOW	800-1000	900	Eco low concentration
GasFlux GF "ECO" EXTRA LOW	800-1000	900	Eco extra low concentration
GasFlux GF P1	800-1000	900	Standard low concentration
GasFlux GF P2	800-1000	900	Standard medium concentration
GasFlux GF P3	800-1000	900	Standard high concentration

FLEXIBILITY IN FORMATS

In order to meet the needs of the market, increasingly oriented towards the efficiency of production processes, we are able to create, **rings, preforms, pieces of wire, discs, shims.**

Rings are available with overlapping or non-overlapping ends, in single-turn or multi-turn. For larger diameters they are packaged and supplied on tubes..

OUR TECHNOLOGY



NANOTECH

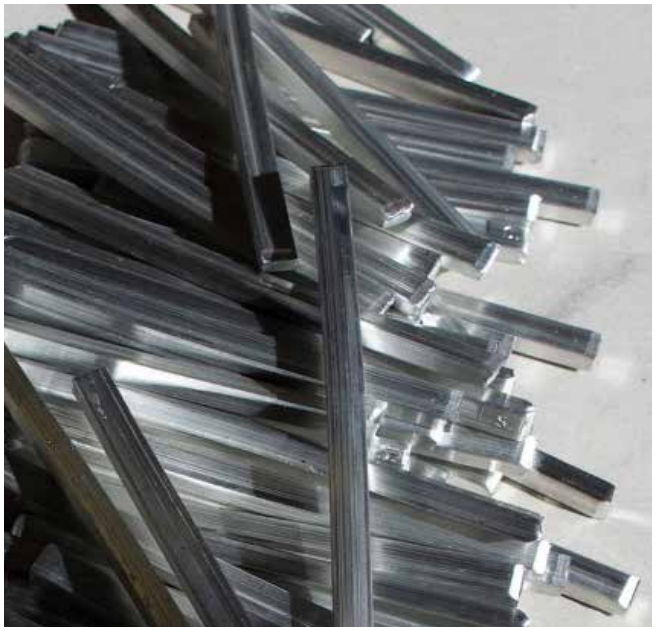
The alloys with **NanoTech** technology are produced through secondary metallurgical processes, which allow the obtaining of phosphorus microparticles. This, together with the addition of specific elements, prevents the alloy from bubbling during brazing, allowing greater operator control and generally improving wettability. In this way the brazing will be **cleaner and free of porosity.**

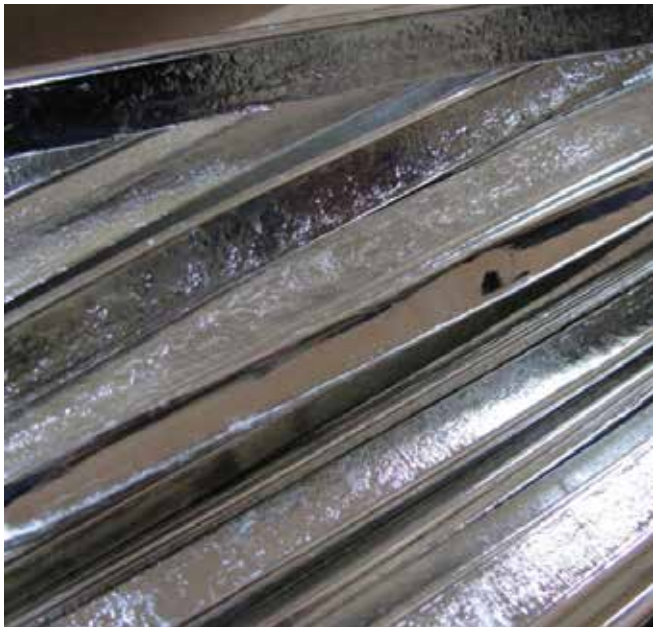
CLEANTECH

CleanTech is the latest evolution of fluxes. Our **range of CleanTech fluxes have eliminated toxic components** whilst increasing the quality of the brazing. **CleanTech** is cleaner for the environment and for your products!

SOFT SOLDERS

Tin-based alloys are commonly used in the so-called soft brazing, so called because of the lower working temperatures compared to hard brazing, hence the name 'soft solders'. The main use for these alloys is in the **electronics sector** for joining components to printed circuits. The most common format for these products is in spools.





Low melting temperature

Product	Composition %			Melting temperature °C	International Norms		
	Ag	Sn	Pb		DIN 1707 / BS-219 / EN 29453 / ISO 9453	NFA 81-362	ASTM B321-96at
Elettristan 50	-	50	50	183-216	S - Pb 50 Sn 50	50 E1	50A
Elettristan 60	-	60	40	183-189	S - Sn 60 Pb 40	60 E1	60A
Elettristan Ag 3,5	3,5	96,5	-	221-223	S - Sn 97 Ag 3 *	96 E1 *	-
Elettristan Ag 5	5	95	-	221-235	S - Sn 96 Ag 4 *	94 E1 *	-
Meccanistan 50	-	50	50	183-216	S - Pb 50 Sn 50	50 E1	50A
Meccanistan 60	-	60	40	183-238	S - Sn 60 Pb 40	60 E1	60A
Meccanistan Ag 3,5	3,5	96,5	-	221-223	S - Sn 97 Ag 3 *	96 E1 *	-
Meccanistan Ag 5	5	95	-	221-235	S - Sn 96 Ag 4 *	94 E1 *	-
Nodistan 50	-	50	50	183-216	S - Pb 50 Sn 50	50 E1	50A
Nodistan 60	-	60	40	183-189	S - Sn 60 Pb 40	60 E1	60A
Nodistan Ag 3,5	3,5	96,5	-	221-223	S - Sn 97 Ag 3 *	96 E1 *	-
Nodistan Ag 5	5	95	-	221-235	S - Sn 96 Ag 4 *	94 E1 *	-

* Equivalent

NOTES

2022/11 | ENG

PIETRO GALLIANI
BRAZING

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