



PIETRO GALLIANI
METAL INNOVATION, SINCE 1885

BRAZING CATALOGUE



CENTURIES OF METAL FOILS

Your excellence partner for the development and supply of technologically advanced, high value-added solutions.

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WELCOME TO PIETRO GALLIANI

OVER 100 YEARS OF EXPERIENCE IN THE CREATION
OF BRAZING ALLOYS

MORE THAN 1000 PRODUCTS ENTIRELY MADE IN ITALY

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

PIETRO GALLIANI S.p.A. is the largest European producer of brazing alloys, with over 100 years of experience in the manufacturing of high-quality products.

With a **product range capable of meeting any specific requirement in the brazing industry**, we offer a wide selection of **alloys in the form of bare and coated rods, wires, foils, rings and preforms, powder fluxes, pastes and dispensable products.**

The continuous development of new products and solutions is a fundamental part of our DNA.

OUR HISTORY

PIETRO GALLIANI S.p.A. has been operating in the **precious metal processing** sector for over 100 years.

Since 1995, it has established itself as a European leader in the production of brazing materials, manufactured entirely at our facilities in Vergato, approximately 50 km south of Bologna.

Through continuous R&D activity and constant attention to product quality, we are able to supply our customers with all main alloys and fluxes used in the brazing sector, developing, producing and promoting dedicated products and services.



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SILVER-BASE ALLOYS

Our **Silver-Base Brazing Alloys** represent the ideal solution for high-quality brazing. Designed to operate at low temperatures, these alloys are perfectly suited for joining a wide range of materials including iron, carbon steel, stainless steel, copper, nickel and their alloys.

They are available in several formats – rods, foils and wire – to meet any specific brazing requirement.

KEY FEATURES:

Versatile use: Ideal for a wide variety of brazing applications, from routine maintenance to high-precision industrial production.

High joint quality: Excellent flow and capillary penetration ensure strong joints with outstanding mechanical properties.

Strength: The joints maintain structural integrity under pressure and vibration.

Controlled production process:

From melting onwards, every production step is managed internally to guarantee maximum quality.

SECTORS:

Designed for companies requiring reliable, high-quality brazing solutions, our alloys are widely used in sectors such as HVAC, mechanics, electronics and infrastructure construction.

AVAILABLE FORMATS:

Bare and coated rods, rings and preforms, wire and foil.



Product	Composition %					Melting range (°C)	Operating temperature (°C)	Density (g/cm ³)	Breaking Charge (N/mm ²)	International Standard					
	Ag	Cu	Zn	Sn	Other					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	-	Si 0,25	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	-	Si 0,25	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 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	Disp. in BAG-36	AG 104	Disp. 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

COPPER-PHOSPHORUS AND COPPER-PHOSPHORUS-SILVER ALLOYS

Our CuP and CuPAg alloys are the preferred choice for sanitary and plumbing applications. These alloys are particularly appreciated for their resistance to dezincification, as they contain no zinc – a crucial factor for maintaining long-term quality and durability of the joints.

KEY FEATURES:

Excellent thermal conductivity: Allows rapid and efficient brazing with a quick heating system, optimising processing time.

Versatile application: Suitable not only for copper, but also for brass and bronze when used together with flux, ensuring clean and strong joints.

Dezincification prevention:

The zinc-free composition prevents material degradation, ensuring long-lasting integrity.

SECTORS:

These alloys are ideal for companies operating in the HVAC sector that require safe, durable and resistant sanitary installations, particularly in environments with demanding hygiene and maintenance standards.

AVAILABLE FORMATS:

Bare rods, rings and preforms, wire, foil.



Product	Composition %				Melting range (°C)	Operating temperature (°C)	Density (g/cm ³)	Breaking Charge (N/mm ²)	International Standard					
	Ag	Cu	P	Other					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
NanoTech 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 281A
NanoTech CuPAg 5*	5	89	6	-	645-815	710	8,2	250	-	CP 104 *	-	-	CP 4	CuP 281A
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 283A
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

*also available in **NanoTech PLUS**

TRIFOIL TRI-TECH

Trifoil Tri-Tech is an advanced solution for brazing hard metal, especially suitable for the brazing of saw teeth.

This exclusive product consists of an innovative combination of two silver-alloy foils bonded to a central copper foil. Through advanced technology and extremely high-pressure rolling, the three layers are joined into a single monolithic structure, ideal for demanding brazing applications.

KEY FEATURES:

Advanced composition: Two silver-alloy foils and a central copper foil bonded through a unique rolling process ensuring a perfect interface.

Innovative technology: The high-pressure rolling guarantees uniformity and quality of the final foil.

Excellent strength and impact resistance: Tri-Laminate Tri-Tech provides superior mechanical resistance, meeting the strict requirements of tool applications.

Optimal performance: Ideal for applications requiring exceptional resistance and extended service life, ensuring maximum efficiency and safety.

SECTORS:

Particularly suited for companies in the tool and cutting-instrument manufacturing industries, where robust and reliable material bonding is essential.

AVAILABLE FORMATS:

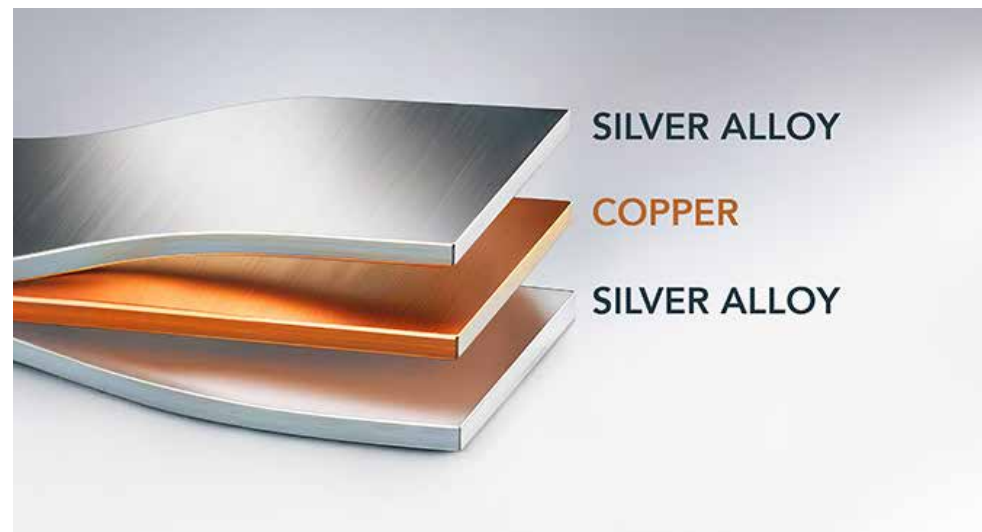
Foil.



Product	Composition %					Melting range (°C)	Operating temperature (°C)	Density (g/cm ³)	Breaking Charge (N/mm ²)	International Standard					
	Ag	Cu	Zn	Sn	Other					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

* Equivalent

Product	Melting range (°C)	International Standard		Description
		AWS 5.31	EN 18496	
Specific deoxidizers for Tri-Tech (trimetallic)				
GalFlux UB PS	550-850	FB3-C	FH 12	High-temperature tool brazing deoxidizer – brown paste
CleanTech X85 PS	550-850	FB3-C	FH 12	Non-toxic deoxidizer for brazing tools – for automatic dispensers – brown paste
GalFlux DF300	550-850	FB3-C	FH 12	Dosing deoxidizer for automatic high-temperature tool brazing machines – brown paste



BRASS ALLOYS

Discover our **Brass Alloys**, perfect for projects requiring impeccable aesthetics in brazed joints. Thanks to their excellent atomic diffusion behaviour, these alloys are ideal for applications where the joint must remain invisible, ensuring a visually clean and elegant result.

KEY FEATURES:

Superior aesthetics: Brass alloys effectively conceal joints, enhancing the final appearance of the finished piece.

Versatility: Perfect for high-end furniture or brass displays where aesthetic perfection is essential.

Flawless appearance: They ensure nearly invisible joints, preserving the natural beauty of the brass component.

Premium applications: Highly appreciated in the production of quality furniture and displays, where every detail matters.

SECTORS:

Ideal for companies and artisans working in the furniture and décor sectors where finishes and appearance are critical.

AVAILABLE FORMATS:

Bare and coated rods, rings and preforms, wire.



Product	Composition %					Int. di solidus -liquidus	Operating temperature (°C)	Density (g/cm ³)	Breaking Charge (N/mm ²)	International Standard					
	Cu	Zn	Ni	Si	Other					AWS A5.8	EN 1044	DIN 8513	NFA 81-362	BS 1845	EN 17672
GalFlo Ot Si Ag1	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 Ni 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 470A
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 671

ALUMINIUM ALLOYS

Our **Aluminium Alloys** are specifically formulated for brazing aluminium to other materials, offering excellent performance and reliable results. These alloys are used in refrigeration, air conditioning, the automotive sector and hobby applications where strong and durable joints are required.

KEY FEATURES:

High reliability: Designed to ensure strong, durable brazed joints, ideal for demanding environments and applications.

Versatility: Suitable for a wide range of uses, from large refrigeration and HVAC systems to delicate automotive components and hobby projects.

Strength and durability: Developed to withstand tough conditions and ensure long-lasting joints.

Application flexibility: Whether working on large or small components, these alloys offer the versatility required for optimal results.

SECTORS:

Ideal for engineers, technicians and hobbyists working with aluminium in the refrigeration, HVAC and automotive sectors.

AVAILABLE FORMATS:

Bare rods, rings and preforms, wire, spheres.



Product	Composition %				Melting range (°C)	Operating temperature (°C)	Density (g/cm ³)	Breaking Charge (N/mm ²)	International Standard					
	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	BAISi-5	AL 101	B-AI95Si-575/630	-	B/SB AL95Si	AI 105
GalFlo AlSi 12	88	12	-	-	575-585	580	2,65	125	BAISi-12	AL 104	B-A88Si-575/585	-	B/SB AL88Si	AI 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	-	-	-	-	-	-

SOFT SOLDER ALLOYS

Our **Tin-based Soft Solder Alloys** have been developed specifically for soft soldering, a technique that uses lower temperatures than traditional brazing. This makes them ideal for the electronics sector, where they are often used to solder delicate components onto printed circuit boards.

KEY FEATURES:

Low working temperatures: Essential for applications requiring minimal heat input to avoid damaging sensitive components.

Electronics-specific uses: Perfect for soldering electronic components, ensuring safe and durable connections.

Practical format: Available on spools, easy to use and adaptable to different soldering needs.

Reliable connections: Ensures high-quality joints critical to the proper functioning of electronic devices.

Adaptability: Suitable for a wide variety of electronic applications, from small devices to larger equipment.

SECTORS:

Recommended for companies and technicians in the electronics industry needing reliable solutions for printed circuits and other sensitive components.

AVAILABLE FORMATS:

Bare rods, wire, rings and preforms.



Product	Composition %			Melting range (°C)	International Standard		
	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

AVAILABLE FORMATS

FOILS

Thin foils available in different thicknesses and widths. They offer excellent application versatility and are suitable for high-precision automatic processes.



BARE AND COATED RODS

Bare rods: Used for brazing with separate flux, they provide excellent handling and precision during application.

Coated rods: Featuring integrated flux, they simplify the brazing process by reducing preparation and cleaning time. Ideal for quick and safe operations.



AVAILABLE FORMATS

WIRE

Brazing wire in various diameters, suitable for both manual and automated processes. Available on spools or coils.



RINGS AND PREFORMS

Closed and calibrated rings ready for use, perfect for precise and consistent joints. Rings guarantee uniform metal quantity and improve process efficiency.

Preforms (discs, pellets, stamped shapes) are customized elements designed for specific applications, enabling repeatable and controlled brazing while optimizing production time and cost.



BRAZING FLUXES

Efficient, reliable and compliant solutions

GALFLO fluxes ensure effective **oxide removal and clean, uniform brazing** on a wide range of metals and alloys.

Thanks to continuous **research and development**, Pietro Galliani provides high-performance products fully compliant with the latest **environmental and safety regulations**.

OUR LINES OF DEOXIDIZERS

GALFLO ECO GREEN



Safety and sustainability

The new **GALFLO Eco Green** line combines **technical efficiency** and **environmental responsibility**.

Free from **boric acid** and formulated with optimized borate content, it eliminates **H360 and H361 hazard** statements while maintaining excellent brazing performance. Fully **REACH compliant**, it is available in **powder, paste** and **coated rod versions**.

GALFLO CLEANTECH

The **Cleantech** line offers formulations **free from boric acid** with performance comparable to standard fluxes. **Free from hazard statement H361**, it ensures high effectiveness and stability during brazing. Available in powder, paste and coated rods.

GALFLO STANDARD

The standard line guarantees consistent **performance and great versatility** for general brazing applications. It ensures excellent oxide removal and good filler metal flow. Available in **powder** and **paste**.



AVAILABLE FORMATS

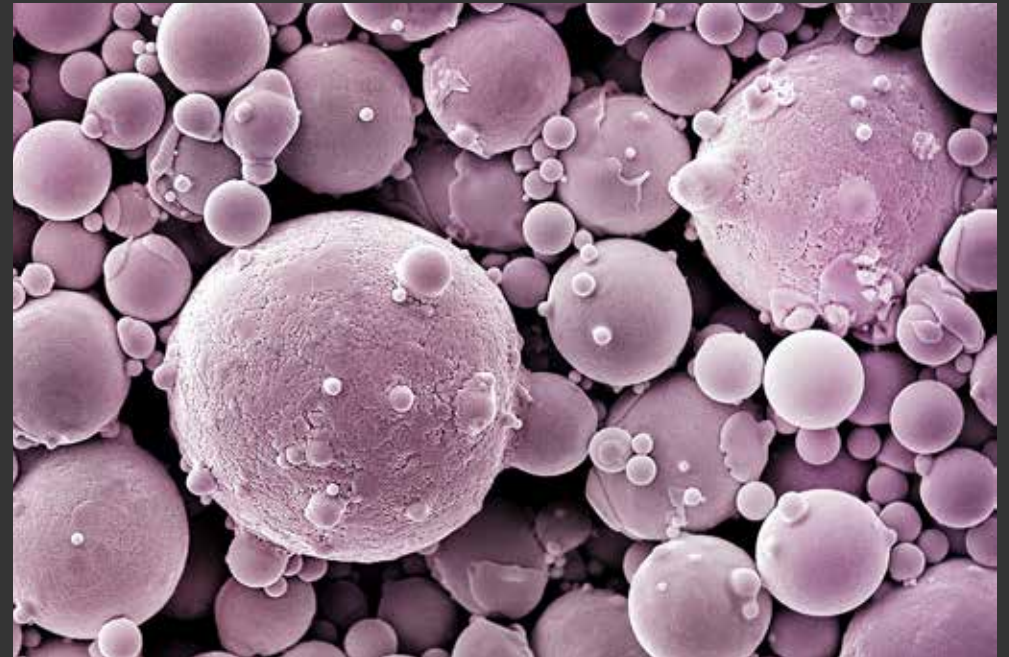
- Powder
- Paste
- Coated rods

Product	Melting range (°C)	International Standard		Description
		AWS 5.31	EN 18496	
Eco Green Deoxidizers				
Galflo EcoGreen	500-800	FB3-F	FH 10	Non-toxic deoxidizer for medium-temperature brazing
Standard deoxidizers				
GalFlux XLT PW/PS/AF	450-800	FB3-F	FH 10	Standard low-temperature deoxidizer
GalFlux SHT PW/PS/AF	550-800	FB3-F	FH 10	Standard medium-temperature deoxidizer
GalFlux S PLUS PW/PS	500-800	FB3-F	FH 10	Standard medium-temperature deoxidizer
GalFlux UWR PW/PS	500-800	FB3-F	FH 10	Deoxidizer for high-temperature brazing of tools
GalFlux UW PS/AF	550-800	FB3-F	FH 10	Deoxidizer for high-temperature brazing of tools - white paste
GalFlux UB PS/AF	550-800	FB3-C	FH 12	Deoxidizer for high-temperature brazing of tools - brown paste
GalFlux Bronze PW	800-1000	FB3-J	FH 21	Standard high-temperature deoxidizer for brass
GalFlux NanoTech PS	450-800	-	FH 10	Special NanoTech deoxidizer
CleanTech Series Deoxidizers				
CleanTech XLT PW/PS/AF	450-800	FB3-F	FH 10	Non-toxic low-temperature deoxidizer
CleanTech SHT PW/PS/AF	450-800	FB3-F	FH 10	Non-toxic medium-temperature deoxidizer
CleanTech XHT PW/PS/AF	500-850	FB3-F	FH 10	Non-toxic high-temperature deoxidizer
CleanTech X85 PS/AF	500-990	FB3-C	FH 10	Non-toxic deoxidizer for brazing tools - for automatic dispensers - brown paste
CleanTech Bronze PW/PS/AF	800-1000	FB3-J	FH 21	Non-toxic high-temperature deoxidizer for brass
Aluminum Deoxidizers				
GalFlux AlCor 101 PW/PS/AF	520-660	FB3-C	FL 10	Aluminum deoxidizer - corrosive
GalFlux AlNc 101 PW/PS	570-660	-	FL 20	Aluminum deoxidizer - non-corrosive
GalFlux ZnNc 101 PW/PS/AF	430-480	-	FL 20	Aluminum deoxidizer - non-corrosive

OUR TECHNOLOGIES

NANOTECH

Pietro Galliani has developed a **new generation of brazing alloys** that surpass the performance of traditional alloys, providing cleaner, stronger and more reliable joints. The special **NanoTech** formulation produces a **"no sparking"** effect and ensures improved operator control and superior deoxidising action. The result is cleaner brazing with no porosity. For applications requiring greater fluidity, **NanoTech PLUS** is available, featuring a higher phosphorus content and enhanced capillary action.



CLEANTECH

CleanTech represents the latest evolution in flux technology. This **range significantly reduces toxic components** while increasing brazing quality. It is cleaner for the environment – and for your products.



REFINING

Pietro Galliani provides advanced solutions for the recovery and refining of silver from production scrap originating from industrial, jewelry and electrical component sectors.

We purchase production scrap containing silver, which is melted at high temperatures in a crucible.

This process produces ingots that, through subsequent processing, allow us to recover **high-quality silver** ready to be reintroduced into the production cycle.

CUSTOMER BENEFITS

Comprehensive collection and evaluation service:

We manage the entire process in-house, offering precious-metal assessments at the **best market conditions**, enabling customers to recover significant value from their scrap materials.

Rigour and transparency: Every batch undergoes strict quality controls, including **double testing for silver fineness** to ensure reliable results, along with detailed analyses to identify other elements or impurities.



SAMPLING SERVICE

We understand how important it is to evaluate a material before integrating it into production processes. For this reason, we offer a **customized sampling** service that allows our customers to test alloys in advance with complete freedom and without obligation.

Through this service, it is possible to:

- **Test samples directly on production lines with support from our technicians**
- **Identify the most suitable alloy for specific needs through customized compositions**

Each **sample is tailor-made** and accompanied by our dedicated technical support to ensure a complete and reliable evaluation.



RESEARCH & DEVELOPMENT

Pietro Galliani leads in the research and development of new products, introducing increasingly efficient, flexible and reliable solutions.

Our highly qualified specialists work closely with partners to design, test and develop innovative, customised ideas and products.

Our experts support you in:

- **Identifying the most effective solutions to issues arising during processing**
- **Laboratory analysis: micrographs and metallographic examination of brazed joints (tolerances, joint design, capillarity)**
- **Developing new products, including joint development with your R&D department**
- **Developing automation in production processes**

ISO 9001 & ISO 14001 CERTIFICATION

Improving product quality and service efficiency has always been a core mission and value of Pietro Galliani S.p.A.

This commitment has been recognised since 1996 with **ISO 9001** certification for the production, processing and sale of non-ferrous metals in various formats.

The **UNI EN ISO 14001** certification is the latest recognition of our sustainability policies and environmental commitment.



Italia

ISO 9001 & ISO 14001
CERTIFICATION

RESEARCH & DEVELOPMENT

QUALITY

We ensure the highest standards of quality for our products and services through modern instrumentation and highly qualified personnel, enabling continuous monitoring and optimisation of production processes.

MECHANICAL TESTS:

- Tensile strength, elongation, yield strength
- Vickers hardness (HV)
- Surface roughness
- Electrical conductivity/resistivity
- Wettability (surface tension in dyne/cm)
- Peeling test

CHEMICAL ANALYSIS:

- Determination of impurities and major elements through ICP-OES analysis

METALLOGRAPHIC ANALYSIS:

- Macro- and micrographic examination

of material structure using optical and stereoscopic microscopy

- Analysis of grain structure and grain size

DIMENSIONAL PROCESS CONTROL:

- Thickness
- Width
- Diameter

OTHER TESTS:

- Strip camber measurement
- Surface appearance inspection



Innovation, quality and safety
at the service of selected
customers. **Flexibility** and
transparency in every stage
of product development,
punctuality, **reliability** and
maximum customization
of solutions.

PG | **PIETRO GALLIANI**
METAL INNOVATION, SINCE 1885

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