LINBRAZE®

brazing powders industry

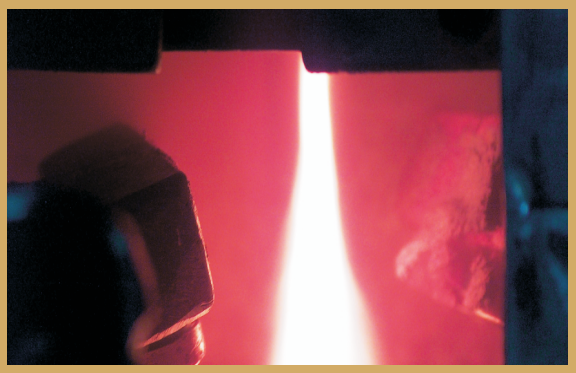
Metal Powders
Alloy Powders

The future is in your hands

ITALIAN MANUFACTURER

Company Profile

LINBRAZE is a leading manufacturer of metal powders, granules and brazing pastes for brazing, soldering and braze-welding, specializing in the technologies of metal atomization and post atomization, in the development and production of innovative products, such as non-ferrous and precious metal powders of high quality needed for a wide range of industrial technology applications. *LINBRAZE* is strongly focused in the field of component manufacturing for automotive industry, powder metallurgy, metal injection molding, surface coatings, diamond tools, metallic fillers, tool-making, cold cast applications, architectural applications, sculptures, dusting, printing inks, screen-printing, coatings on paper or foil substrates, industrial paints, decorative paints, antifoul paint additives.



Through continuous investment in research and development and through an established network of relationships with the top international research centers, *LINBRAZE* has developed a technological and manufacturing leadership globally recognized: a record evidenced by the partnerships signed with leading global players in the automotive , military , heating, aeronautic, nuclear, etc.

LINBRAZE, immersed in the green of the Sicilian hills, takes seriously the management of the environment and the social responsibility by engaging conscientiously to develop renewable products, through innovation and sustainable improvement of production processes.

Vision

To listen, and meet the needs of our customers, driving them to the excellence as market leader, helping them sell better. Bringing every day in their company the security of a advanced product and the joy of receiving tailor-made solutions, simple and innovative, with the use of professional competencies certified and diversified by offering a constant support and a efficient service.

Technological innovation

Linbraze employs a team of skilled technicians for the development of new products and technologies, and capable of provide a fair level of technical support at zero cost. The continuous investment in technological innovation, the thirty years of experience and a high degree of specialization of the company's technical resources are our strengths to create and maintain competitive standards of quality and of efficency that make us unique in the market of pastes and of metal powders.

Mission

Applying the innovative technology of metal powders and pastes to help our customers to solve global challenges. Our valuable proposition provides innovative and sustainable solutions, designed to help our customers improve productivity, to reduce costs and mitigate risks. *LINBRAZE* believes in the Italian industrial model (Made in Italy) that combines elements of superior quality and simple solutions, offering a thirty-year experience in the field of powder metallurgy and brazing. Our sense of belonging, courage and intellectual curiosity inspire our way of being and identify the people with whom we work. *LINBRAZE* continues to expand its international presence, engineering products and the expertise of the service, always binding its development to the satisfaction of its customers.

Top Quality

LINBRAZE continues to offer higher quality, a wider choice of products, the highest performance, added value services, technological superiority and an excellent relationship between supply and price. Within our manufacturing and before shipment to the customer, raw materials, semi-finished and finished products are tested through different levels of analysis and quality testing. Observing and complying with the requirements of the customer is the key part of *LINBRAZE* trade policy, helping to avoid potential increases in costs and the onset of inconvenience is our daily concern. The *LINBRAZE* production provides internal quality standards that far exceed international regulations ISO, AWS, EN.

Metal Powders

With thirty years of experience in the production of metal powders, *LINBRAZE*, through production facilities that meet in a reactive way any kind of requirement for quality and quantity of the product, and to provide adequate flexibility to produce special powder alloys with unique chemical, satisfing the customer requests by type, shape and particle size.
Focused on meeting the needs of it's customers, *LINBRAZE* uses a variety of techniques for the production of metal powders, chosen specifically for customer needs.

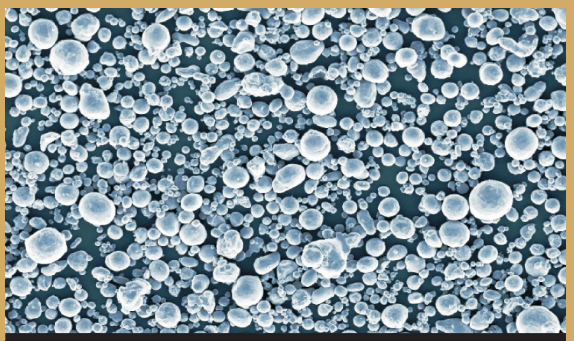
LINBRAZE powder production equipment: melting and casting furnaces, atomizer chambers, tundishes, nozzle systems, powder collectors, particle seperators, cyclone and Venturi transport systems, mixing stations and filling stations.

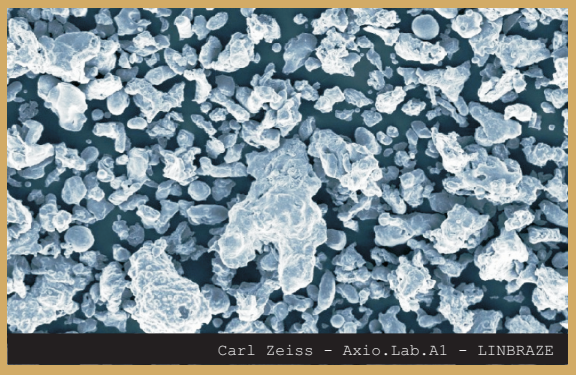
Manufacture of Metal Powders

LINBRAZE powders are tailor made, produced and developed, on the customer requirements, each *LINBRAZE* powder is manufactured with a specific technique of production:

Air Atomized Powder

The metal powders obtained through air atomization are used for various applications in many industrial sectors, and are produced on specifically client request. Through the use of the air atomization process, the solidification of the particles is slower and for this the particle, having more time, tends to reach the spherical shape.



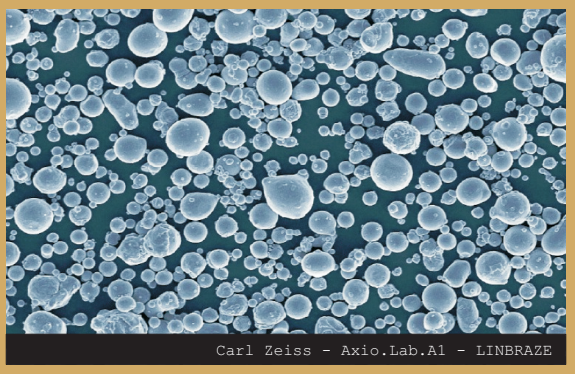


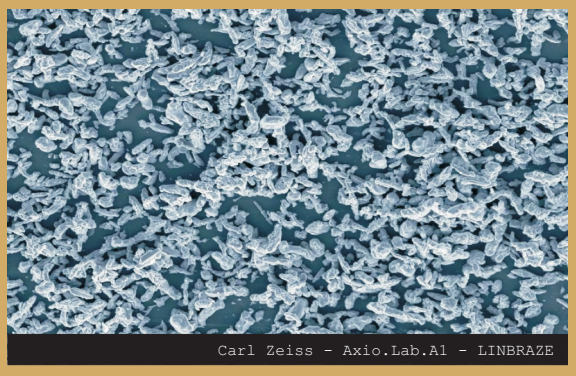
Water Atomization

This technique is used for the production of powders with irregular shape, that ensuring a much larger surface area, excellent compressibility and green strength at moderate compacting pressures. This powders are generally used in applications of chemical reaction, as for sintering, and in numerous industrial sectors.

Gas Atomization

This method of production involves the advantages of use of low amount of oxygen, of obtaining highly spherical powder and allows to produce powders for use highly challenging and specialized. Our gas atomized powders are used in various industries as well as for brazing, thermal spray and surface coating industries.





Electrolytic Powders

With the electrolytic method you get a no consistent powder that shatters easily by mechanical action, characterized by a very irregular shape and very high surface area.
The powders are used for various applications and have a high purity, good thermal and electrical conductivity, good behavior in the pressing and sintering.

Air Atomized Copper Powders

	Composition in %							Grain size µm	Apparent density gr/cm2
LIN-Alloy	Cu	P	O2				Shape		
COPPER MS	Rem.	0,2	0,2				Spherical	< 106 ÷ 500	4,90 ÷ 5,50
COPPER SS	Rem.	0,2	0,2				Spherical	< 63	4,70 ÷ 4,90
COPPER SSX	Rem.	0,2	0,2				Spherical	< 32	4,50 ÷ 4,70

Water Atomized Copper Powders

	Composition in %							Grain size µm	Apparent density gr/cm2
LIN-Alloy	Cu	P	O2				Shape		
COPPER WMS	Rem.	0,2	0,2				Irregular	< 106 ÷ 425	2,80 ÷ 3,60
COPPER WSS	Rem.	0,2	0,2				Irregular	< 75	2,90 ÷ 3,50
COPPER WSX	Rem.	0,2	0,2				Irregularl	< 45	2,50 ÷ 2,70

Electrolytic Copper Powders

	Composition in %							Grain size µm	Apparent density gr/cm2
LIN-Alloy	Cu	O2					Shape		
CU-EP-2245	Rem.	0,2					Dendritic	< 45	1,20
CU-EP-3363	Rem.	0,2					Dendritic	< 63	1,30
CU-EP-5563	Rem.	0,2					Dendritic	< 63	1,50
CU-EP-77100	Rem.	0,2					Dendritic	< 100	1,70
CU-EP-9980	Rem.	0,2					Dendritic	< 80	1,90

Air Atomized Brass Powders

	Composition in %						Melting Range °C	Grain size µm	Apparent density gr/cm2
LIN-Alloy	Cu	Zn	Sn	Ni	Pb	Si			
BRASS NS	Rem.	18		18		0,2	980	< 63 ÷ 500	3,10 ÷ 3,60
BRASS 100	Rem.	10				0,2	970	< 63 ÷ 500	3,10 ÷ 3,60
BRASS 200	Rem.	20				0,2	960	< 63 ÷ 500	3,10 ÷ 3,60
BRASS 700	Rem.	30				0,2	950	< 63 ÷ 500	3,10 ÷ 3,60
BRASS 330	Rem.	33				0,5	920	< 63 ÷ 500	3,10 ÷ 3,60
BRASS 600	Rem.	40				0,3	905	< 63 ÷ 500	3,10 ÷ 3,60
BRASS 303	Rem.	40	0,2			0,4	900	< 63 ÷ 500	3,10 ÷ 3,60
BRASS 305	Rem.	42		10		0,2	920	< 63 ÷ 500	3,10 ÷ 3,60
BRASS 306	Rem.	40	1	0,5		0,2	890	< 63 ÷ 500	3,10 ÷ 3,60
BRASS 520	Rem.	48				0,2	880	< 63 ÷ 500	3,10 ÷ 3,60
BRASS 550	Rem.	45				0,2	890	< 63 ÷ 500	3,10 ÷ 3,60
BRASS 400 B	Rem.	40			2		890	< 63 ÷ 500	3,10 ÷ 3,60
BRASS 350 B	Rem.	35			1,5		910	< 63 ÷ 500	3,10 ÷ 3,60

Air Atomized Bronze Powders

	Composition in %						Melting Point °C	Grain size µm	Apparent density gr/cm2
LIN-Alloy	Cu	Sn	Zn	Ni	Pb	P			
BRONZE 4	Rem.	4				0,2	1063	< 106 ÷ 500	4,0 ÷ 5,0
BRONZE R	Rem.	4				0,2	1063	< 63	4,0 ÷ 5,0
BRONZE 6	Rem.	6				0,2	1040	< 106 ÷ 500	4,0 ÷ 5,0
BRONZE E	Rem.	6				0,2	1040	< 63	4,0 ÷ 5,0
BRONZE 8	Rem.	8				0,3	1020	< 106 ÷ 500	4,0 ÷ 5,0
BRONZE L	Rem.	8				0,3	1020	< 63	4,0 ÷ 5,0
BRONZE 10	Rem.	10				0,2	970	< 106 ÷ 500	4,0 ÷ 5,0
BRONZE 10 P	Rem.	10				1	965	< 106 ÷ 500	4,0 ÷ 5,0
BRONZE D	Rem.	10					970	< 63	4,0 ÷ 5,0
BRONZE S	Rem.	10	2			0,2	970	< 63	4,0 ÷ 5,0
BRONZE S/P	Rem.	10	2			1	960	< 63	4,0 ÷ 5,0
BRONZE 11	Rem.	11				0,2	955	< 106 ÷ 500	4,0 ÷ 5,0
BRONZE 12	Rem.	12				0,2	895	< 106 ÷ 500	4,0 ÷ 5,0
BRONZE 15	Rem.	15				0,2	855	< 106 ÷ 500	4,0 ÷ 5,0
BRONZE 20	Rem.	20				0,2	810	< 106 ÷ 500	4,0 ÷ 5,0
BRONZE 25	Rem.	25				0,2	770	< 106 ÷ 500	4,0 ÷ 5,0
BRONZE 40	Rem.	40				0,2	740	< 63	4,0 ÷ 5,0
BRONZE 40 P	Rem.	40				1	740	< 63	4,0 ÷ 5,0
BRONZE 50	Rem.	50				0,2	685	< 63	4,0 ÷ 5,0
BRONZE 50 P	Rem.	50				1	685	< 63	4,0 ÷ 5,0
BRONZE W	Rem.	24	16				840	< 63	4,0 ÷ 5,0

Air Atomized Copper-Phosphorus Powders

	Composition in %						Melting Point °C	Grain size µm	Apparent density gr/cm2
LIN-Alloy	Cu	P	Sn	Ni	Si	O2			
RO 180	Rem.	7				0,2	820	< 63 ÷ 500	4,5 ÷ 5,8
RO 386	Rem.	7	7			0,2	700	< 63 ÷ 500	4,5 ÷ 5,8
RO 182	Rem.	8				0,2	770	< 63 ÷ 500	4,5 ÷ 5,8
ME	Rem.	3		10		0,2	995	< 100	4,5 ÷ 5,8
ME 6022	Rem.	20		20		0,2	1040	< 150	4,5 ÷ 5,8

Air Atomized Lead-Bronze Powders

	Composition in %							Grain size µm	Apparent density gr/cm2
LIN-Alloy	Cu	Sn	Zn	Ni	Pb	P	Shape		
BRONZE PY	Rem.	10			10		Spherical	< 150	4,6 ÷ 5,9
BRONZE PP	Rem.	2			27,5		Spherical	< 150	4,6 ÷ 5,9
BRONZE PL	Rem.				33		Spherical	< 150	4,6 ÷ 5,9
BRONZE PK	Rem.	1,7			24,5		Spherical	< 150	4,6 ÷ 5,9
BRONZE PX	Rem.	5			24,5		Spherical	< 150	4,6 ÷ 5,9
BRONZE RSX	Rem.	3,8			22,5		Spherical	< 150	4,6 ÷ 5,9

Silver based powders

Metal Powders

Air Atomized Silver Powders

Composition in %								Grain size µm	Apparent density gr/cm2
LIN-Alloy	Ag	O_2					Shape		
AG-SF-7750	> 99,9	0,3					Spherical	< 53	5,50 ÷ 5,70
AG-SF-5563	> 99,9	0,3					Spherical	< 63	5,40 ÷ 5,60
AG-SF-66100	> 99,9	0,3					Spherical	< 100	5,60 ÷ 5,80
AG-SF-44150	> 99,9	0,3					Spherical	< 150	5,30 ÷ 5,50

Electrolytic Silver Powders

Composition in %								D-50 size µm	Apparent density gr/cm2
LIN-Alloy	Ag	O_2					Shape		
AG-EP-3015	> 99,9	0,3					Dendritic	< 15	2,00 ÷ 4,00
AG-EP-4015	> 99,9	0,3					Dendritic	< 15	3,00 ÷ 5,00
AG-EP-1720	> 99,9	0,3					Dendritic	< 20	1,00 ÷ 2,50
AG-EP-2020	> 99,9	0,3					Dendritic	< 20	1,00 ÷ 3,00
AG-EP-1715	> 99,9	0,1					Dendritic	< 15	1,00 ÷ 2,50
AG-EP-2110	> 99,9	0,1					Dendritic	< 10	1,30 ÷ 3,00

SILFLOK Series

Silver Flake

Silver Flakes

Composition in %								D-50 size µm	Apparent density gr/cm2
LIN-Alloy	Ag	O_2					Shape		
SILFLOK 48	> 99,9	0,1					Flake	< 25	0,70 ÷ 1,40
SILFLOK 67	> 99,9	0,1					Flake	< 20	0,70 ÷ 1,40
SILFLOK 70	> 99,9	0,1					Flake	< 15	0,70 ÷ 1,40
SILFLOK 90	> 99,9	0,1					Flake	< 10	0,70 ÷ 1,40
AGIFLOK 800	> 99,9	0,1					Flake	< 53	0,70 ÷ 1,40

Gas Atomized Nickel Powders

	Composition in %							Hardness HRC	Apparent density gr/cm2
LIN-Alloy	Ni	Cr	B	Si	C	Fe	Others		
EL 5560H	Rem.	15	3,1	4,5	0,7	4,2		55 - 60	5,50 ÷ 5,70
EL 4550H	Rem.	12	2,5	3,3	0,3	2,5		45 - 50	5,40 ÷ 5,60
EL 3640H	Rem.	8	1,7	3,9	0,4	2,4		36 - 40	5,60 ÷ 5,80
EL 3035H	Rem.	6,5	1,2	4,1	0,2	1,2		30 - 35	5,30 ÷ 5,50
EL 3238H	Rem.	4	1,3	3,1	0,1		P2,5 Mo2,7	32 - 38	5,40 ÷ 5,60
EL 3033H	Rem.	4,5	0,8	2,2	0,1		P2,1 Mo2,5	30 - 33	5,60 ÷ 5,80
EL 2832H	Rem.	4	0,9	2,2	0,1		P2,1 Mo2,5	28 - 32	5,30 ÷ 5,50

Nickel Master Alloy Powders

	Composition in %							Melting point °C	Apparent density gr/cm2
LIN-Alloy	Ni	Si	P	Fe	Cu	Al	Others		
NiP 16 EF	Rem.	0,15	16	0,1	0,2	0,05		1100 ÷ 1175	2,50 ÷ 3,00
NiP 20 EF	Rem.	0,15	20	0,1	0,2	0,05		1100 ÷ 1175	2,40 ÷ 3,10
NiSi 35 EF	Rem.	35		0,2		0,1		985	2,10 ÷ 2,40

Gas Atomized Copper-Nickel Powders

	Composition in %						Melting Point °C	Grain size µm	Apparent density gr/cm2
LIN-Alloy	Cu	Ni	Sn	Mn	B	O2			
CUPRONI 30	Rem.	3			0,1	0,02	1100	< 63 ÷ 500	4,5 ÷ 5,8
CUPRONI 90T	Rem.	9	6			0,02	1110	< 63 ÷ 500	4,5 ÷ 5,8
CUPRONI 110	Rem.	11				0,02	1150	< 63 ÷ 500	4,5 ÷ 5,8
ME 8703	Rem.	3		10		0,02	995	< 100	4,5 ÷ 5,8
ME 6022	Rem.	20		20		0,02	1040	< 150	4,5 ÷ 5,8

Customer's Care & Satisfaction

LINBRAZE 's objective is to help the customers around the world to discover new ways to save on overall costs, improving the quality of their brazing processes thus improving the quality of their parts produced using our materials.
LINBRAZE supports the customers through the study of their latent or emerging needs, the creation and the development of products/services capable to meet their requests.
LINBRAZE is concentrated on offering transparent, effective and understandable communication to the customers. Understanding what is important to our customers gives us the opportunity to bring to them the solutions most suited to their needs.
Our objective is to propose the superior quality of *LINBRAZE* in terms of product, service, technical assistance and technology, presenting a business proposal with the right solutions in terms of optimization of the costs incurred by the customer.
Our customer service speaks English, Italian and German.

Guidance to the Solution

LINBRAZE provides its customers with simple and innovative solutions tested in our labs before being proposed to them.
Our consultative approach is focused to resolve problematic issues and improve production processes of our customers.
For more information about our solutions, for your industry, please contact us at the Headquarters in the Division Brazing & Metal Powders Division:

LINBRAZE S.r.l.
C/da Torre Chimera s/nc
93019 Sommatino (CL) ITALY

Tel: +39 0922 871 694
Fax: +39 0922 709 064
E-mail: info@linbraze.com
Web: www.linbraze.com

Timely Delivery Service

LINBRAZE offers its customers a timely delivery service. By having centralized our manufacturing and our warehouse in our headquarters in Italy, we have the ability to manage with flexibility and immediacy the urgent requirements. Efficient services of logistics and transport with immediate availability in stock, make *LINBRAZE* a partner flexible, secure and reliable.

Worldwide Distribution

LINBRAZE is present in several countries in the world with agencies, direct and indirect. Contact us for more information about the point of sale nearest you.

The future is in your hands

LINBRAZE®
brazing powders industry

C/da Torre Chimera, s/nc
93019 Sommatino (CL) - ITALY
Tel. +39 0922 871 694 - Fax +39 0922 709 064
www.linbraze.com

Printed in Italy - 11/2014 #