



Non ferrous metal powders





Pometon holds a unique position within the market, offering a comprehensive range of metal powders, including Ferrous and Non Ferrous grades and specifically

**FERROUS POWDERS:**

- Water atomised iron powders
- Annealed iron powders
- Specific alloyed grades for PM industry
- Special prealloyed steel grades

**NON FERROUS POWDERS:**

- Irregular copper
- Irregular bronze, brass, and other alloys
- Electrolytic (dendritic) copper
- Silver Coated dendritic copper
- Spherical Tin and Zinc

All products are made in our European facilities and are labelled EUR1 (goods of CE origin)

Continuous investment in research and development has allowed us to focus on innovation and become cost competitive. Pometon are the undisputed world leaders in this market.

Quality products and a qualified process, dedicated to large-scale production are the strength of Pometon, supplying demanding and exacting markets such as the automotive component sector.

Pometon is accredited to ISO 9001, ISO 14001 and ISO 45001 quality, environmental and HS systems, guaranteeing the highest level of customer service.

The commercial centre, along with a network of subsidiaries, agents and distributors are readily available to offer support and technical assistance. This combined with our ability to provide an excellent worldwide delivery service will ensure a first-class solution to your business needs.





## ATOMIZED COPPER POWDERS (IRREGULAR SHAPE)

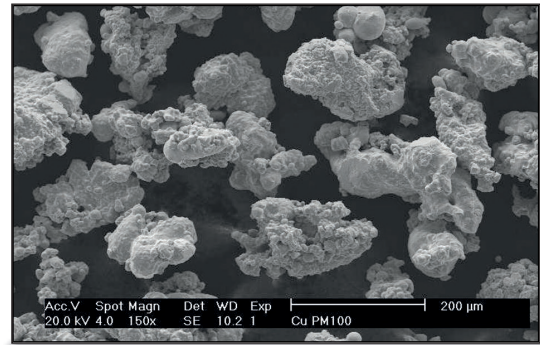
### PRODUCT CHARACTERISTIC

Irregular copper powders are used in a variety of applications where the expected apparent density (A.D.) have a range from 2.2 up to 3.5 g/cm<sup>3</sup>. These powders allow a high specific surface, good compressibility and flowability.

### TYPICAL APPLICATIONS

The broad product range by A.D. and the possibility of various size grades allows to support applications in the following fields and application:

- Friction liners (Organic and sinter technology)
- PM industry (sintering applications)
- Seals and resin fillers
- Chemical applications
- Diamond tools compounds
- Welding/Soldering paste



| Product name | Particle size |          | Max oxygen [w%] | A.D. range [g/cm <sup>3</sup> ] |
|--------------|---------------|----------|-----------------|---------------------------------|
|              | Cut sieve μm  | <45 μm % |                 |                                 |
| Cu PM450     | 500           | 2 max    | -               | 2.50 - 4.00                     |
| Cu W425-75   | 425           | 10 max   | -               | 2.40 - 3.20                     |
| Cu WG        | 350           | 3 max    | -               | 2.50 - 3.30                     |
| CU DR150     | 300           | 20 - 40  | 0.2             | 2.60 - 3.00                     |
| CU W212M     | 212           | 15 - 40  | 0.2             | 2.10 - 2.40                     |
| CU WRCP      | 212           | 45 - 55  | 0.2             | 2.65 - 2.85                     |
| CU 100 MESH  | 212           | 30 - 45  | 0,4             | 2.50 - 3.00                     |
| CU W150      | 150           | 60-70    | 0.2             | 3,00 - 3.60                     |
| CU PM100     | 150           | 61 - 67  | 0.15            | 2.25 - 2.45                     |
| CU W106      | 150           | 30 max   | 0.2             | 3.35 - 3.95                     |
| CU W60M      | 125           | 60 - 80  | 0.2             | 2.00 - 2.40                     |
| CU 200 MESH  | 106           | 60 - 80  | 0.4             | 2.60 - 3.10                     |

## PHOSPHOROUS COPPER POWDERS

A powder with very specific use, the combination of P and Cu decrease the fragility of welding and brazing operation and gives a relevant deoxidizing properties. Typical applications for:

- Sintered brakes pad
- Diamond tools
- Jewellery
- Chemical

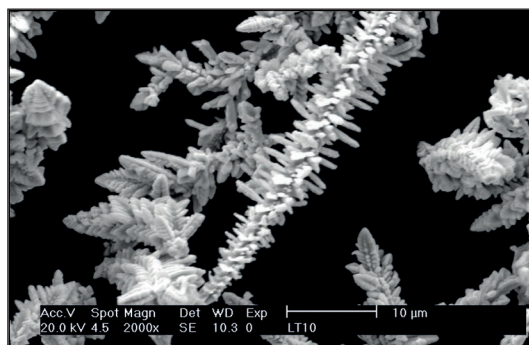
| Product name | Cut sieve μm | < 45 micron % | Alloy composition % | A. D. [g/cm <sup>3</sup> ] |
|--------------|--------------|---------------|---------------------|----------------------------|
| CuP15 W100   | 106          | 60 - 80       | P = 13 - 16         | 2.20 - 3.20                |
| CuP15 W106   | 150          | 60 - 90       | P = 13 - 16         | 2.20 - 3.20                |



## ELECTROLYTIC COPPER POWDERS

Produced by electrolysis, starting from Cu cathodes, this powder has a dendritic morphology and a very high chemical purity. Pometon production range runs from an Apparent Density of 0.7 g/cm<sup>3</sup>, up to 3.2 g/cm<sup>3</sup>, that allow us to supply customer in different field of application of which the most common are:

- Carbon brushes
- Diamond tool
- Resin and plastic filler
- Friction
- Welding and brazing
- Electric and electronics industry
- PM Application



| Product name | Particle size |           |                 | A.D. range [g/cm <sup>3</sup> ] |        |
|--------------|---------------|-----------|-----------------|---------------------------------|--------|
|              | Cut sieve µm  | <45 µm %  | Max oxygen [w%] |                                 |        |
| LNP0         | 106           | 88 min    | 0.4             | 0.65 - 0.75                     | light  |
| LP0          | 106           | 88 min    | 0.4             | 0.65 - 0.75                     |        |
| LT8          | 106           | 90 min    | 0.3             | 0.78 - 0.88                     |        |
| LT10         | 106           | 90 min    | 0.4             | 0.95 - 1.10                     |        |
| LT12         | 106           | 90 min    | 0.3             | 1.15 - 1.25                     |        |
| LT13         | 106           | 90 min    | 0.3             | 1.25 - 1.35                     |        |
| LT16F        | 106           | 98 min    | 0.3             | 1.30 - 1.70                     | medium |
| LT16         | 106           | 90 min    | 0.3             | 1.50 - 1.60                     |        |
| LT16G        | 150           | 70 - 80   | 0.3             | 1.50 - 1.70                     |        |
| LT18         | 106           | 70 - 80   | 0.3             | 1.70 - 1.90                     |        |
| LT22         | 106           | 90 min    | 0.3             | 2.10 - 2.30                     |        |
| SF           | 106           | 62 - 82   | 0.15            | 1.80 - 2.20                     | high   |
| SE           | 150           | 57 - 67   | 0.15            | 2.20 - 2.40                     |        |
| SA           | 212           | 10 - 20   | 0.15            | 2.30 - 2.50                     |        |
| G            | 355           | 5 max >75 | 0.2             | 2.40 - 3.40                     |        |
| GG           | 630           | 2 max >75 | 0.1             | 2.70 - 3.20                     |        |

## ELECTROLYTIC COPPER POWDERS ULTRAFINE

| Product name | Particle size D50 µm | Max oxygen % | A. D. [g/cm <sup>3</sup> ] |
|--------------|----------------------|--------------|----------------------------|
| LT10UF       | 9 - 14               | 0,3          | 0,80 - 1,20                |

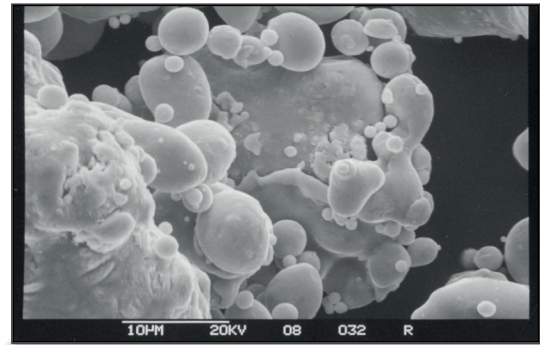


## ATOMIZED TIN AND ZINC POWDERS

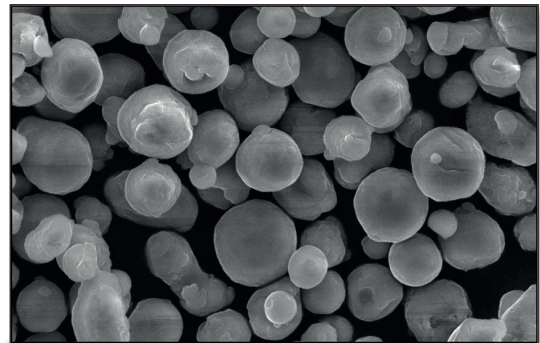
Both metals are atomized by air, starting from high purity ingots. The careful selection of raw material and the attention to production, allow Pometon to meet the specific requirements of our customers and the exacting standards of the most demanding ones too.

Characterized by a nodular shape our materials are used in:

- Friction
- Chemicals
- Diamond tools
- PM/Sintering where Sn is used with Cu Powder to obtain Bronze Sintered Parts
- Jewellery
- Chemical



TIN



ZINC

### TIN

| Product name | Particle size |               | Sn %     | A.D. range [g/cm <sup>3</sup> ] |
|--------------|---------------|---------------|----------|---------------------------------|
|              | Cut sieve μm  | < 45 micron % |          |                                 |
| IMP          | 106           | 98            | 98 min   | 1.60 - 3.00                     |
| 75F          | 106           | 85 - 97       | 99.7 min | 3.40 - 4.00                     |
| 106          | 125           | 55 - 85       | 99.7 min | 3.40 - 4.20                     |

### ZINC

| Product name | Particle size |               | Zn %     | A.D. range [g/cm <sup>3</sup> ] |
|--------------|---------------|---------------|----------|---------------------------------|
|              | Cut sieve μm  | < 45 micron % |          |                                 |
| S            | 250           | 23 - 43       | 99.7 min | 2.90 - 3.20                     |
| PM           | 250           | 50 - 90       | 98 min   | 2.60 - 3.20                     |
| SSS          | 150           | 65 - 90       | 99.7 min | 2.75 - 3.15                     |
| IMP          | 45            | 99 min        | 97 min   | 1.60 - 2.60                     |



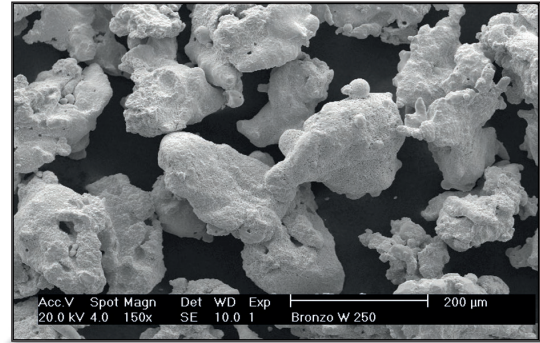
## WATER ATOMIZED BRONZE POWDERS

Different binary melted alloys, Cu/Sn, atomized by high pressure water, transforms itself in Bronze powder characterized by an irregular shape.

This morphology ensures that this powder can be compacted to high density as it is or as basis for Copper Based Premixes.

The wide range of particle size ensure our product is extremely suitable in all fields of application:

- Sintering
- Friction
- Diamond tools
- Resin and plastic filler
- Decorative
- Soldering and Brazing
- Chemical

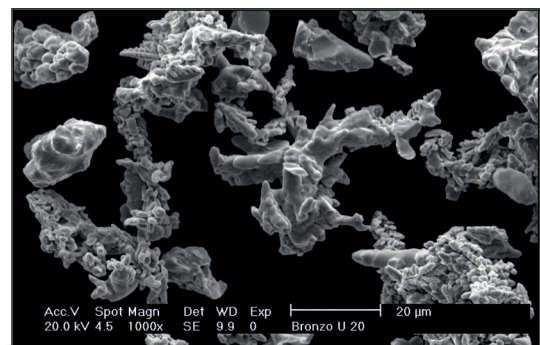


| Product name  | Particle size |          |          | Alloy composition % | Max oxygen [w%] | A.D. range [g/cm <sup>3</sup> ] |
|---------------|---------------|----------|----------|---------------------|-----------------|---------------------------------|
|               | Cut sieve µm  | <45 µm % | <63 µm % |                     |                 |                                 |
| CuSn10 A355   | 355           | 30 max   | -        | Cu90 - Sn10         | -               | 3.10 - 3.50                     |
| CuSn10 W250   | 250           | 10 - 30  | -        | Cu90 - Sn10         | 0.15            | 2.80 - 3.10                     |
| CuSn10 WR150  | 212           | 15 max   | -        | Cu90 - Sn10         | 0.15            | 2.30 - 2.90                     |
| CuSn10 W50    | 90            | 80 min   | -        | Cu90 - Sn10         | 0.15            | 3.00 - 3.70                     |
| CuSn15 W75    | 106           | 60 - 90  | -        | Cu85 - Sn15         | 0.15            | 3.00 - 3.60                     |
| CuSn15 W45    | 106           | 90 min   | -        | Cu85 - Sn15         | 0.2             | 2.60 - 3.10                     |
| CuSn20 M100   | 125           | 55 - 75  | -        | Cu80 - Sn20         | -               | 2.90 - 3.50                     |
| CuSn20 M50    | 90            | 80 min   | -        | Cu80 - Sn20         | -               | 2.60 - 3.30                     |
| CuSn4 W463    | 80            | 85 max   | -        | Cu96 - Sn4          | 0.15            | 3.30 - 4.00                     |
| CuSn9 W250-63 | 250           | -        | 20 - 40  | Cu91 - Sn09         | 0.3             | 2.70 - 3.30                     |

## DIFFUSION BONDED BINARY CU/SN POWDERS

Tin powder is diffused on the surface of ECP and then heated in furnace at low temperature. This process allows an excellent homogeneity and consistency in chemical composition.

This material is used in specific application where the production of a very high mechanical strength and a good surface appearance is required.



| Product name | Particle size |          | Alloy composition % | A.D. range [g/cm <sup>3</sup> ] |
|--------------|---------------|----------|---------------------|---------------------------------|
|              | Cut sieve µm  | <45 µm % |                     |                                 |
| U10          | 212           | 15 - 25  | Cu90 - Sn10         | 2.45 - 2.70                     |
| U20          | 160           | 40 - 60  | Cu80 - Sn20         | 1.65 - 1.95                     |



## TERNARY BRONZE POWDERS

A Water atomized alloy Cu/Sn/Zn is used as filler for PFTE (Polytetrafluoroethylene) for the production of gaskets for the industry.

Pometon also produces a diffusion bonded material 88/10/2 based on electrolytic copper powder (ECP) that allows a very high mechanical resistance of the compound.

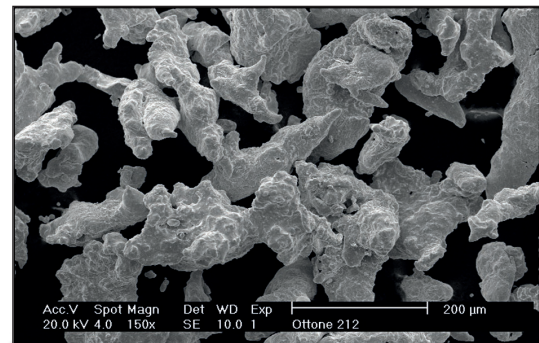
| Product name  | Particle size           |                     | Alloy composition % | Max oxygen [w%] | A.D. range [g/cm <sup>3</sup> ] |
|---------------|-------------------------|---------------------|---------------------|-----------------|---------------------------------|
|               | Cut sieve $\mu\text{m}$ | <45 $\mu\text{m}$ % |                     |                 |                                 |
| CuSn10Zn2 W53 | 90                      | 70 min              | Cu88 - Sn10 - Zn2   | 0.15            | 2.9 - 3.50                      |
| CuSn10Zn2 W60 | 90                      | 50 - 70             | Cu88 - Sn10 - Zn2   | 0.15            | 3.10 - 3.70                     |

## ATOMIZED BRASS POWDERS

An alloy CuZn show a good ductility, powders Cu70Zn30 are largely used in sintering to produce parts with special shapes and high resistance. Cu80Zn20 alloy is also available.

Brass is also used within the Friction Industry.

Increasing the percentage of Cu brass takes a warmer color, similar to gold, for that "Tombac" is used in decorative market sectors.



| Product name  | Particle size           |                     | Alloy composition % | A.D. range [g/cm <sup>3</sup> ] |
|---------------|-------------------------|---------------------|---------------------|---------------------------------|
|               | Cut sieve $\mu\text{m}$ | <45 $\mu\text{m}$ % |                     |                                 |
| CuZn30 OT1000 | 1000                    | 10 max <75          | Cu70 - Zn30         | 2.25 - 2.90                     |
| CuZn30 OT212  | 250                     | 10 - 40             | Cu70 - Zn30         | 2.90 - 3.50                     |
| CuZn30 OT63   | 106                     | 50 - 70             | Cu70 - Zn30         | 2.80 - 3.60                     |
| CuZn20 OT150  | 212                     | 25 - 60             | Cu80 - Zn20         | 2.90 - 3.60                     |



## PREMIX POWDERS

Pometon range of base and prealloyed powders is completed by the family of Premix grades. These powders are supplied ready for pressing. Premix grades can be based on each elemental powder and completed by alloying elements, additives and graphite. Each grade is the result of a co-development either in term of definition of the components or in the identification of the control methods used, ensuring a consistent product ready for use.



|   |                   | 511         | 513         | 515         | 518             | 550         | 551             | 552         | OT212ALS    | 302         |
|---|-------------------|-------------|-------------|-------------|-----------------|-------------|-----------------|-------------|-------------|-------------|
| <b>Mix Composition</b>  | Sn                | 9 - 11      | 9 - 11      | 9 - 11      | 9 - 11          | 9 - 11      | 9 - 11          | 9 - 11      | -           | 5           |
|   | Zn                | -           | -           | -           | -               | -           | -               | -           | 28.5 - 31.5 | -           |
|   | C                 | -           | 1.40 - 1.60 | -           | -               | 0.35 - 0.45 | -               | 0.15 - 0.25 | -           | 0.60        |
|   | Cu                | bal         | bal         | bal         | bal             | bal         | bal             | bal         | bal         | bal         |
|   | Fe                | -           | -           | -           | -               | -           | -               | -           | -           | 50          |
|   | Lubricant         | 0.40 - 0.60 | 0.35 - 0.45 | 0.75 - 0.85 | 0.40 - 0.60     | 0.35 - 0.45 | 0.45 - 0.55     | 0.55 - 0.65 | 0.90 - 1.10 | 0.60        |
| <b>Apparent Density</b>   | g/cm <sup>3</sup> | 3.10 ± 0.20 | 2.85 ± 0.15 | 2.50 ± 0.15 | 2.7 ± 0.20      | 2.90 ± 0.10 | 3.00 ± 0.10     | 2.90 ± 0.10 | 2.85 ± 0.35 | 2.90 ± 0.10 |
| <b>Flow Rate</b>  | s/50 g            | 45 max      | 45 max      | 45 max      | 45 max          | 40 max      | 40 max          | 40 max      | 55 max      | 40 max      |
| <b>Green Strength at density 6.0 g/cm<sup>3</sup></b>                   | N/mm <sup>2</sup> | > 2.0       | > 3.0       | > 3.0       | > 6.0           | > 5.0       | > 4.0           | > 4.0       | -           | > 16.0      |
| <b>Dimensional change 810 °C - 10 min - N<sub>2</sub>/H<sub>2</sub></b> | %                 | 0.30 - 0.90 | 1.30 - 1.90 | 0.20 / 0.70 | - 0.70 / - 0.20 | 0.00 - 0.50 | - 0.30 / + 0.20 | 0.00 / 0.50 | -           | -           |







A small sample of our product range is detailed in this brochure.  
However, as a major manufacturer in this market, our expertise is fully  
utilised by producing material to customers exact and specific requirements.



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