

GENERAL INFORMATION
General information

Production process	Soldering and brazing
Typology	Solder for silver

Melting temperatures

Liquidus [°C]	410.0
Solidus [°C]	400.0
Melting range [°C]	10.0

Physical characteristics

Density [g/cm ³]	3.0
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Working temperatures

Temperature - from [°C]	830.0
Temperature - to [°C]	890.0
Soldering time (s)	20 – 40

Physical - mechanical characteristics

Dimensional fraction > 45µm [%]	5
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Commercial composition

Zinc (%)	88,90
Copper (%)	9,50
Phosphorus (%)	1,60



GOLD line

PRODUCT TECHNICAL GUIDELINES**Product applications**

GS1 is a zinc based soldering powder for silver. This powder has good resistance to mechanical stresses. GS1 offers very low melting temperature, wettability and penetration capacity. It is indicated for the soldering of machine-made chain and hollow chain in silver at title 925 and 800 mill.

Supplementary informationGeneral instructions for the soldering of machine-made chains and hollow chains by using GS1 soldering powder.

- The chain joint links must be close enough together that they lock the soldering powder; the optimal distance between the joints should be between 0.05 and 0.2mm. It is best to avoid very closed and parallel links: best results are often obtained from "V" joints.
- Before soldering the chains should be degreased in solvents such as trichloroethylene.
- For preparation of liquid solutions please refer to the following indications:
 - for chains obtained by wire with diameter from 0.20mm to 0.50mm: use a solution composed by 30% castor-oil in trichloroethylene;
 - for chains obtained by wire with diameter from 0.50mm to 1.50mm: use a solution composed by 40% castor-oil in trichloroethylene + 20% PLY-FLUX1 or of PLY-FLUX (*) solution;
 - for chains obtained by wire with diameter from 1.50mm to 4.00mm: use a solution composed by 40% castor-oil in trichloroethylene + 40% PLY-FLUX1 or of PLY-FLUX (*) solution;
 - for "Veneziana" chains: use a solution composed by 5% castor-oil in trichloroethylene.
- When the liquid solutions are ready, immerse the chain in the solution for a few seconds. Then, dry the chain using blotting paper. The whole operation must not exceed 5 minutes.
- By vibrating tumblers make the "blunging" (time: about 4 minutes each hank);
- Then skip to the "neutralization" step: during this operation, pay attention to the excess of solder. According to the size of the chain hank, the chain hank in the talc moist with vaseline oil (about 10% vaseline oil for every Kg talc).
- Put the chain hank in the dried and clean talc.
- In the end pass all chains along the belt furnace; use under controlled atmosphere 70% Hydrogen, 30% Nitrogen.

Package

The product is supplied in 10kg packaging (2 plastic bags of 5 kg each, inside a metallic bucket). Every bag contains inside an anti-humidity silica-gel capsule.

Stability and preservation

The product maintains its soldering properties for 12 months from the manufacturing date if properly stored in sealed package and kept in cool (10-25°C) and dry environments (50-70% R.U.). Once the package has been opened, the product has to be used in short time respecting the conditions of storage.

Safety information

Thin dusts may cause irritation to the respiratory system. It is recommended the wearing of protective masks and operating under properly designed air-breathing systems. Fine dusts may give the formation of explosive mixtures with air. For further information refer to the material safety data sheet.

(*) for information refer to PLY-FLUX1 or PLY-FLUX technical chart.