MATERIAL

Alloy recycled by electrolysis ofrom waste ash from the Kebag incineration plant in Zuchwil and drawn by the Grillo company in Duisburg.

ENVIRONMENTAL IMPACT

0.30 kg CO2-eq or 10 times less than a conventional copper alloy 3 kg CO2-eq.

APPLICATIONS

Mainly used for the manufacture of fittings and decorative parts, this alloy replaces brass or nickel silver. It complies with the new European legislation on lead-free alloys while guaranteeing the same high level of machining and aesthetic performance, such as guilloché, shot peening and beading.

BATCH CERTIFICATE	Guarantee of traceability of the raw materials used.
AVAILABLE FORMATS	- In strips: extruded from 0.3 to 2 mm and drawn from 7 to 20 mm, in rolls. - In round bar stock : diameters 8 to 50 mm, length 300 mm to 3.000 mm. - Flat stock, profiles, tubes: inscribed in a circumference of 50 mm, small quantities possible. - To order: 500 kg according to your dimensions.
PROCESS SPECIFICATIONS	- Bar: cast in bloom /billet, hot extruded, drawn, finished tolerance h9 or +/- 0.1, length setting. - Strips: cast in strip, rolled, finished tolerances +/- 0.1.
DESIGNATION	ZnAl15Cu1MG.
CHEMICAL COMPOSITION (AVERAGE DATA)	Zn: 83.1780 Al: 15.7550 Cu: 1.0600 Mg: 0.0040 Pl max: 0.0030 Cd max: 0.0003..
GENERAL PROPERTIES	Very good machinability in conventional or automatic machines, very good formability for stamping, good polishability.
MECHANICAL PROPERTIES	- Bars: yield strength: Rp0.2 = 310-410 MPa, tensile strength: Rm = 355-455 MPa, elongation: A = 10 - 25 %, and Brinell hardness HB = 115-125. - Strips: yield strength: Rp0.2 = 310 MPa, tensile strength: Rm = 355 MPa, elongation: A = 15 %, and Brinell hardness HB = 115-125.
MICROSTRUCTURE	Grain size varies between 1 and 20 microns. The inclusion level is very low.
SURFACE TREATMENTS	Galvanic (coloring): very good.
JOINING TECHNIQUES	Resistance welding, spot welding, projection welding, friction welding, crimping, riveting, these processes have given excellent results.
STAMPING ABILITY	Excellent, annealing for stabilization useful.
CORROSION RESISTANCE	Surface passivation by gilding and/or rhodium plating and/or chemical treatment possible.