

The new high quality line (*) of Copper Beryllium born to garant the maximum structural homogeneity and purity in composition.

Formaplast 105 has optimal mechanical characteristics, high thermal conductivity, excellent wear , corrosion and bonding resistance . Furthermore it has excellent polishability, high mechanic fatigue resistance as well as amagnetic properties. Particular characteristics of this alloy make it very flexible and usefull in many usages and different industrial sectors as: Injection plastic mould, Oil&gas, aeronautic /aerospace, marine, electronic and mechanical.

Chemical Composition

Beryllium	1,6 ÷ 2,0 %
Cobalt + Nichel	min 0,2 %
Cobalt + Nichel + Iron	max 0,6 %
Copper	Balance

Typical Mechanical Properties

	reference values	
Hardness	36÷42	Hrc
Hardness	340÷390	HB
Tensile Strenght	1140÷1380	N/mm ²
Yeld strenght 0,2%	970÷1200	N/mm ²
Elongation A5	3-10	%
Elastic Modulus	131	Gpa

Advantages / Benefits

Due to the unique combination of thermal conductivity and strength available in these copper mold alloys, you gain advantages like:

- Shorter cycle time
- Improved plastic part dimensional control
- Better parting line maintenance
- Excellent corrosion resistance

Physical Properties

	reference values	
Electric Conductivity	min 25	%IACS
Electric Conductivity	min 18	m/Ω mm ²
Thermal Conductivity 20 °C	130	W/m °K
Thermal Conductivity 100°C	155	W/m °K
Coeff. Thermal Expansion	17,5	ppm/°C
Specific Heat <small>(Heat Capacity)</small> 100°C	440	J/kg°K
Melting points	870-980	°C
Density	8,36	g/cm ³

The complete line

at 20°C

FormaPlast	105	106	W/m°K
FormaPlast	105 ^{LH}	130	W/m°K
FormaPlast	160	130	W/m°K
FormaPlast	200	217	W/m°K
FormaPlast	240	208	W/m°K
FormaPlast	340	337	W/m°K