

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

Formaplast 105 LH 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	30	Hrc
Hardness	290	HB
Tensile Strenght	965	N/mm <sup>2</sup>
Yeld strenght 0,2%	760	N/mm <sup>2</sup>
Fatigue strenght	>310	N/mm <sup>2</sup>
Elongation A5	15	%
Elastic Modulus	131	Gpa

## Markets and Applications

Formaplast 105LH is used for injection mold cores and cavities where moderate hardness and

## Physical Properties

	reference values	
Elctric Conductivity	min 25	%IACS
Elctric Conductivity	min 18	m/Ω mm <sup>2</sup>
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 <sup>3</sup>

## 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

## The complete line

	at 20°C		
FormaPlast	105	106	W/m°K
FormaPlast	105 LH	130	W/m°K
FormaPlast	160	160	W/m°K
FormaPlast	200	217	W/m°K
FormaPlast	240	208	W/m°K
FormaPlast	340	337	W/m°K

### *Safe use of Copper Beryllium*

Handling copper beryllium at solid-state does not present a risk for health. Unproper use as in most of industrial material and workings without any specific protection could represent a risk for health.

Beryllium inalation in the air can cause a serious lung disease for all subjected people.

About occupational safety and health of working people the italian health department has fixed compulsory limits to the professional breathing exposures.

Before starting to work this material or for any doubt we invite you to get in touch with us directly , during working hours at +39 55 7318818 , asking for a technical support.

### *Certification and Traceability*

Certification is the one and only way to guarantee the real originality of all formaplast lines. this document only is a proof of the absolute purchase genuinity.

Unfortunately we often see false certification and several materials using our brand illegally. at this purpose, to avoid this risk, we created the system safety certificate to apply for all our goods , that will allow us to guarantee the absolute confidentiality and protection of certificates.

For this reason, we invite you to check and always require ssc certification, that will be issued along with delivery note, relative instructions or QR-Code that will address you to your own certificate.



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*The true original imprinting, impossible to fake*

Production valid only for plates until 300 x 500 mm and round bars until 100 mm.  
We supply forged material for all sizes over this.