



FORMCAST® AL

sintered insulating ceramics for the non ferrous industry

Introduction

FORMCAST® AL is a family of sintered ceramic materials, especially developed for the non ferrous industry.

The products is extremely versatile and it is formulated in 3 distinguished versions to meet specific application requirements.

FORMCAST® AL is delivered preformed as a ready to use product, according to customers' design.

The use of FORMCAST® AL in the non ferrous industry provides the following advantages:

- Excellent overall mechanical properties
- High stability and shock resistance
- Accuracy in tolerances
- Virtually 0 gas emission
- Low density comparing to conventional refractories
- Low thermal conductivity
- non weattable to molten non ferrous metals
- complicated 3d shapes available
- fast and safe installati

FORMCAST® AL		120	150	170
Clasification temperature	°C	1150	1150	1150
Nominal density (dry)	Kg /m ³	1200	1500	1700
Shrinkage (fired product), 24 hours at 900°C	%	0	0	0
Thermal conductivity at mean temperature of 600°C	W /mK	0.4	0.5	0.7
Mean porosity	%	50	40	20
Thermal expansion	mm / K	3 x 10 ⁻⁶	3 x 10 ⁻⁶	3 x 10 ⁻⁶
Hardness	Shore D	65	70	75

General informations:

FORMCAST® AL is generally delivered sintered at 850°C and do not shrink, However, due to its high hygroscopicity it is recommended to dry the finished parts before using them, at least before the first use. Drying secure longer life of the material and allow the humidity absorbed to be evaporated without causing internal mechanical stresses of the mineral matrix. Generally the following drying process is recommended:

- 100°C for 2 hours
- 200°C for 6 hours
- 400°C for 6 hours

In case a complete drying process is not possible, we suggest to dry the material at least at 100°C for 6 hours.

Providing that the material is stocked in warm locations with a low humidity content and in the original packaging, small parts

generally do not need the drying process and may be used immediately

Applicazioni:

- 120: spouts, floaters, supports for die castings
- 150: launders, rings, spoons
- 170: transfer ladles, launders, tips

Workability:

the m,aterial is generally supplied ready to use; however in case of modifications of the shape it can be easily processed with mechanical tools

