

# ISOPLAST HT

## Technical Data Sheet

### Material

ISOPLAST HT is a ready-to-use plastic insulating material with multi-crystalline ceramic fiber, which has a high thermal insulating behavior and a high refractoriness. It can be used in direct contact to melted metal (till 1700 °C)

For further information visit [www.deltaphoenix.it](http://www.deltaphoenix.it)

### General informations

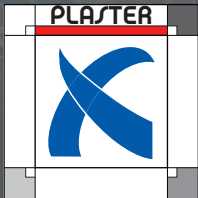
<b>Main component:</b>	Multi-crystalline wad fiber
<b>Melting temperature:</b>	>1800 °C
<b>Highest usage temperature:</b>	1700 °C
<b>Chemical analysis after heating at 150 °C:</b>	Al <sub>2</sub> O <sub>3</sub> +TiO <sub>2</sub> : 86 % SiO <sub>2</sub> : 13 % Na <sub>2</sub> O+K <sub>2</sub> O : 1 % Shot content: None
<b>Density after setting:</b>	1700-1800 [kg/m <sup>3</sup> ]
<b>Density after heating at 1000 °C:</b>	1100-1200 [kg/m <sup>3</sup> ]
<b>Thermal conductivity:</b>	400 °C : 0,116 [W/(m•K)] 1000 °C : 0,349 [W/(m•K)] 1500 °C : 0,465 [W/(m•K)]
<b>Reversible expansion at 1000 °C:</b>	0,6 %
<b>Expansion (+) or shrinkage (-) after heating at:</b>	150 °C : 0,00 [%] 1000 °C : -0,1 [%] 1100 °C : -1,5 [%]
<b>Compressive strength after heating at:</b>	150 °C : 1,27 [MPa] 1000 °C : 2,45 [MPa] 1500 °C : 4,70 [MPa]
<b>Application:</b>	by hand with slow ramming
<b>Drying:</b>	see drying path described above

### Fields of application

- Protective layer and retrofitting of casting ladles of pig-iron, steel, ferro-ally and non-ferrous materials
- Protective layer and retrofitting of channels for cupola furnace /receivers
- Retrofitting of burner cones



ISOPLAST HT is an official brand of Delta Phoenix srl  
Delta Phoenix srl Via XXV Aprile, 15, 25030 Maclodio (Brescia), ITALY. Phone +39 030 978241,  
Fax +39 030 9973964, [www.deltaphoenix.it](http://www.deltaphoenix.it), Mail: [info@deltaphoenix.it](mailto:info@deltaphoenix.it)



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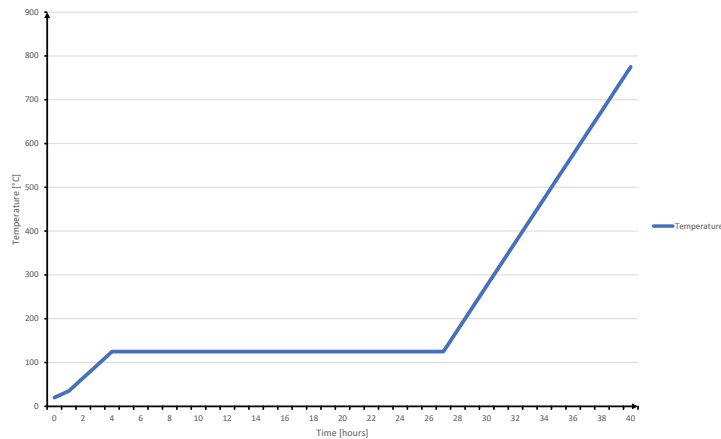
## Drying path

### N.B. :

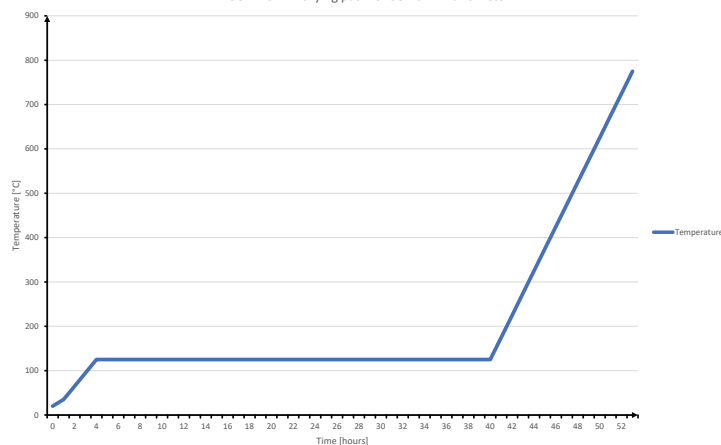
After cooling the material to environmental temperature, it's necessary to close holes and little cracks on the surface using one of the following methods:

- Painting with **ISOPLAST HT** mixed with the 30% of water
- Painting or spraying **TIKOBOND 27** with a thickness of 2-3 mm
- Painting or spraying **TIKOBOND W 3** with a thickness of 2-3 mm

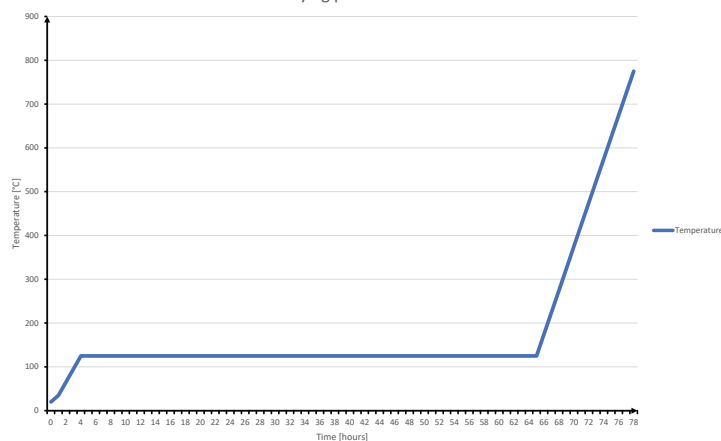
ISOPLAST HT drying path for 20-30 mm thickness



ISOPLAST HT drying path for 30-40 mm thickness



ISOPLAST HT drying path for 40-50 mm thickness

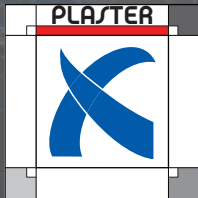


Because of the variation of raw materials used there it should be slight change in the above data. This cannot concern our Company. We can change any specifications to improve material qualities without any preventive communication always in respect of our unconditional evaluation.



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# ISOPLAST HT

## Application

### Main technical characteristics

**ISOPLAST HT** is a thermal insulating ready-to-use plastic material with the following main technical characteristics:

- high thermal insulation
- easy workability and plasticity

### Storage

**ISOPLAST HT** package: 25 kg or 10 kg plastic bags inside plastic barrels.

To preserve best conditions, it's necessary to store material in fresh, haired, dry warehouse, lifted from floor and far from walls.

Storage temperature: 5 °C - 30 °C

If all the information above are confirmed, storage time is 12 months

### Essential tools

**ISOPLAST HT** is a ready-to-use plastic material which can be applied by hand (wearing protective gloves) or by trowel with the warning to wet it to let the material detach itself from the tool

### Preparation of the support

1. Clean surfaces (bricks, concrete, carpentry,...)where material is needed. No dust, slug, metals and any other unstable element is allowed.
2. Wet surfaces before application using **STUCH PH 10**. If this thing is not possible, wet surfaces using **ISOPLAST HT** pre-mixed with 30% of water.



Pic 1: **ISOPLAST HT** application by slow ramming



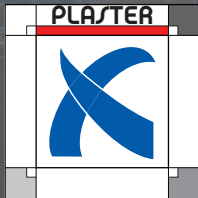
Pic 2: **ISOPLAST HT** application by hand



Pic 1: **ISOPLAST HT** drying with burner



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## Implementation

**ISOPLAST HT** is a ready-to-use plastic material; no mixing or water adding is necessary.

1. Apply **ISOPLAST HT** on wet surfaces as-it-is by hand and/or by trowel, keeping attention to homogenize it with itself and pressing it on the surface.
2. Once application is ended, smooth the surface using a trowel, keeping attention to use the same smoothing direction.

**N.B. : material sticks to tools. keep close a barrel of water to clean tools to easy-detach material from them.**

3. Once smoothing is ended, if the thickness is higher then 20 mm, it is necessary to create holes of 2-5 mm of diameter every 30-40 mm trough the whole thickness of material to easy drying it.

**It is possible to start drying material immediately after the implementation**



Pic 4: drying holes in **ISOPLAST HT**



Pic 4: drying of **ISOPLAST HT** with 40 mm thickness