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STABIL Crucibles

DESCRIPTION

Noltina's Stabil crucibles are carbon-bonded silicon carbide crucibles, which are characterised by very good thermal conductivity and high oxidation resistance. Due to their carbon content, these SiC crucibles have excellent stability at high temperatures and are therefore particularly suitable for processes where the temperature is changing frequently and where high heating rates are utilized.

APPLICATIONS

Noltina's Stabil crucibles are particularly suitable for processes with frequently changing temperatures and high heating rates. Stabil crucibles can be used for the holding of all non-ferrous alloys. They have a very high mechanical strength and a high refractoriness, making them especially suitable for melting heavy metal alloys. Additionally, they are resistant to chemical attack by fluxes. The standard Stabil crucibles are suitable for electric resistance heated and fuel fired furnaces for melting and holding with a melting temperature between 700°C and 1200°C. They perform well under difficult operating conditions. As a consequence of user-related innovative developments, optimised Stabil variants are available, especially for the higher temperature range up to 1400°C.
They are particularly appropriate for melting copper and bronze alloys in furnaces with high power and high heating rates.

TYPICAL METAL CASTING TEMPERATURE

- 700 - 1200°C (1292 - 2192°F)

PERFORMANCE CHARACTERISTICS

- Outstanding thermal shock resistance.
- Very good thermal conductivity.
- High oxidation resistance.
- Very high mechanical strength.
- Good resistance to chemical attack.

IDENTIFICATION

Noltina's Stabil crucibles are coloured black and utilize the suffix C to denote the type.

PATTERN RANGE

Noltina's Stabil crucibles are available in a wide range of sizes and shapes.

QUALITY

Noltina's Stabil crucibles are manufactured from premium grade raw materials under an ISO 9001:2008 quality management system.

PREHEATING/FIRST USE

Crucibles should be preheated empty until they reach a bright-red color.
Heat to 200°C (400°F) over two hours.
Heat at full power to 950°C (1750°F).
Hold at this temperature for one hour.
The cover should be in place throughout the process.
This procedure drives off any moisture absorbed in shipping and sets the glaze to achieve maximum oxidation resistance

CHARGING

As soon as the crucible becomes hot all over, charge and melt immediately. Charge light returns first to form a cushion for heavier metal to follow. Use tongs to charge ingots.
Place large pieces and ingots vertically.

INSTALLING THE CRUCIBLE

The use of a base block made of the same material will ensure uniform heating of the crucible base and help reduce thermal strains.
The base block should have the same or slightly larger diameter as the base of the crucible to provide adequate support
For optimum heat transfer and melting efficiency, the height of the base block should be such that the base of the crucibles is level with the center line of the burner. The base block and crucible should be installed centrally in the furnace.

BALE OUT FURNACES

The crucible should have a 3mm (1/8") gap between the top edge of the crucible and the cover, to allow for expansion of the crucible. Too small of a space can lead to cracking at the top of the crucible
Place a layer of insulating material, such as ceramic fiber between the cover and the top edge of the crucible to seal. Ensure this insulation touches only the top edge of the gap and not the side. The top steel ring must have a12mm (1/2") space between it and the inside of the crucible to allow for expansion Too small of a space can lead to cracking at the top of the crucible.

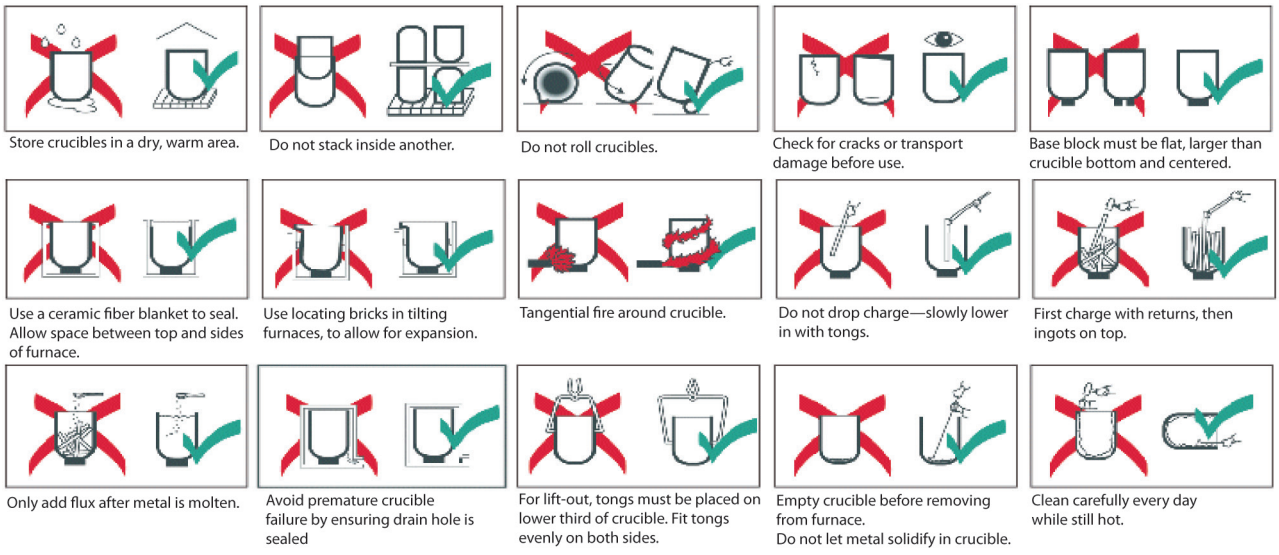
SAFETY.

Proper safety clothing must be worn at all times, refer to AFS. Standards.

Ensure that no moisture is introduced into the melt.

TILTING FURNACES

Cement the base block on the floor of the furnace; make sure it is centrally located and level.
Place the crucible centrally onto the base block. Use Morcem 900 to bond base block and crucible together.
Place the grip bricks 75mm (3") below the top edge of the crucible, leaving a 6mm (1/4") space between the crucible wall and grip bricks.
Insert cardboard or carbonaceous material in the space.
Leave a space of 38mm (1-1/2") below the spout for expansion.



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