

This revision supersedes and substitutes all previous ones

Revision No. 9

## Technical Data Sheet

Characteristics	Dry silica mass based on high purity microcrystalline quartzite, mixed with either Boron Oxide ( $B_2O_3$ ) -AN or Boric Acid ( $H_3BO_3$ ) -AC as a sintering agent. It may also be delivered without any sintering agent. It differs from CUARSIL IS4, because its aggregate composition and grain size distribution have been optimised. Therefore, a better material with higher density and lower porosity has been achieved.						
Application	Lining of high, medium and low frequency coreless induction furnaces for nodular or alloyed melting with high temperature casting, and, in general, those linings that require better performance qualities than CUARSIL IS4 with Boron Oxide or Boric Acid.						
Maximum Service Temperature	Depends on binding percentage. It varies between 1,400°C (for 2.2% Boric Acid and 1.2% Boron Oxide) and 1,650°C (for 1% Boric Acid and 0.5% Boron Oxide).						
Grain Size Distribution	0 – 6 mm						
Type of Bonding	Boric Acid ( $H_3BO_3$ ) between 1 and 2.5%, in IS6 AC Boron Oxide ( $B_2O_3$ ) between 0.3 and 1.2%, in IS6 AN These are average values that can vary $\pm$ 10 % of binder percentage.						
Typical Chemical Analysis * * Of the Quartzite (silica mass without binder)	<table border="0"> <tr> <td><math>Al_2O_3</math></td> <td>max. 0.9 %</td> </tr> <tr> <td><math>SiO_2</math></td> <td>98 – 99 %</td> </tr> <tr> <td><math>Fe_2O_3</math></td> <td>max. 0.4 %</td> </tr> </table>	$Al_2O_3$	max. 0.9 %	$SiO_2$	98 – 99 %	$Fe_2O_3$	max. 0.4 %
$Al_2O_3$	max. 0.9 %						
$SiO_2$	98 – 99 %						
$Fe_2O_3$	max. 0.4 %						
Moisture Content	When supplied with boric acid, take into account the water released on heating at 140 °C (approx. 44% of the acid weight). When the material is going to be used moisture content must be checked, as it can change depending on the transport, storing or environmental conditions.						
Material Required (density)	> 2,160 Kg/m <sup>3</sup>						
Installation	Dry hand ramming or using specific vibration equipments for bottom and sidewalls. See instructions manual.						
Storage	Pallets must be stored in a dry place. Once open, it must be totally consumed or, at least, cover the remaining sacks with a plastic sheet. Maximum lifetime: 12 months.						
Drying and Heating	Depending on furnace's capacity, heat up to working temperature at a rate of 100-180°C/h. (with Boron Oxide as a sintering agent) or at 60-120°C/h. (with Boric Acid). Sintering should be done at 30-50°C over the working temperature, keeping this temperature during 0.5-2 hours. See instructions manual.						

This datasheet contains average values taken from manufacturing control tests made in laboratory following specific rules for each text. They do not settle neither specifications nor guarantees on products' characteristics. This product provides a limited responsibility; ask for details.