










HeBoSint® STRONG LINE

For high mechanical loadings

The **HeBoSint® STRONG LINE** product line stands for boron nitride composite materials with outstanding mechanical properties, very high gas tightness and high wear resistance. The addition of zirconium oxide or aluminium nitride increases the mechanical strength. The boron nitride content of **STRONG LINE** provides the specific boron nitride properties such as electrical insulation and very good separating properties. A product line with a strong character for system components that are exposed to high mechanical loads during application, e.g. cover strips in PVD systems as well as steel industry components.

	HeBoSint® SL-Z 100	HeBoSint® SL-N 300	HeBoSint® SL-A 400
Binder	none	none	Calcium Borate
Composition	hBN+SiC+ZrO ₂	BNSiAlON	hBN+AlN
Typical Density [g/cm³]	2.9	2.3	2.45
Direction Dependence	anisotropic	anisotropic	anisotropic
Thermal Properties			
Pressing Direction	⊥	⊥	⊥
Specific Heat at 20 °C [J/gK]	0.6	0.7	-
Thermal Conductivity at 20 °C [W/mK]	28 38	27 45	65 75
Thermal Expansion [10⁻⁶/K] RT - 1500 °C	8.0 4.0	4.6 2.5	5.6 5.4
Use Temperature max. at °C - Oxidizing Atmosphere - Inert Atmosphere / Vacuum Atmosphere	~ 900 ~ 1800	~ 900 ~ 1800	~ 900 ~ 1600
Electrical and Mechanical Properties			
Orientation of Platelets	⊥	⊥	⊥
Specific Electrical Resistivity [Ohm cm]	> 10 ¹²	> 10 ¹⁵	> 10 ¹⁵
Bending Strength [MPa]	80 120	95 120	80 105
Young's Modulus [GPa]	30 45	30 45	40 60
Compressive Strength [MPa]	170 170	315 270	190 185

-  Wear resistance
-  Purity
-  Low permeability
-  Electrically insulation
-  Thermal conductivity
-  Thermal shock resistance
-  Low thermal expansion
-  Non-wetting behavior
-  Mechanical properties



The data quoted in this leaflet are typical for the material. They are intended as a guide only and should not be used in preparing detailed specifications. Actual product data may deviate from the figures given. We reserve the right to alter product data within the scope of technical progress and new developments. Since processing involves factors that are beyond our control, recommendations made in this leaflet should be checked by preliminary trials, especially for third party applications. These recommendations do not absolve the user from the obligation of investigating the possibility of infringement of third parties' rights and, if necessary, from clarifying the situation.