HeBoSint®
STRONG LINE
For high mechanical loadings

Henze
Focused on Boron Nitride

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

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