

	PURE LINE pure with high thermal performance						CLASSIC LINE reliable and versatile						STRONG LINE for high mechanical loadings					
	HeBoSint® PL 100*		HeBoSint® PL 200		HeBoSint® PL 600		HeBoSint® CL 100		HeBoSint® CL-Z 200		HeBoSint® CL-S 200		HeBoSint® SL-Z 100		HeBoSint® SL-A 400			
<b>Binder</b>	none		none		none		Calcium Borate		none		none		Boric Oxide		Boric Oxide / Calcium Borate			
<b>Composition</b>	hBN		hBN		hBN		hBN		hBN+SiC+ZrO <sub>2</sub>		hBN+SiO <sub>2</sub>		hBN+SiC+ZrO <sub>2</sub>		hBN+AlN			
<b>Typical Density</b> [g/cm <sup>3</sup> ]	1.9		2.0		1.95		1.9		2.3		2.1		2.9		2.5			
<b>Direction Dependence</b>	anisotropic		anisotropic		anisotropic		anisotropic		anisotropic		anisotropic		anisotropic		anisotropic			
<b>Thermal Properties</b>																		
<b>Pressing Direction</b>		⊥		⊥		⊥		⊥		⊥		⊥		⊥		⊥		
<b>Specific Heat at 20 °C</b> [J/gK]	0.5		0.8		0.8		0.6		0.6		0.8		0.6		-			
<b>Thermal Conductivity at 20 °C</b> [W/mK]	20	30	21	29	23	28	33	35	28	45	10	30	28	38	65	75		
<b>Thermal Expansion</b> [10 <sup>-6</sup> /K] RT - 1500 °C	1.0	0.5	1.0	0.5	0.8	0.4	4.0	3.0	4.5	3.0	3.0	0.1	8.0	4.0	5.6	5.4		
<b>Use Temperature max. at °C</b> - Oxidizing Atmosphere - Inert Atmosphere - Vacuum Atmosphere	~ 900 ~ 2300 < 2300		~ 900 ~ 2300 < 2300		~ 900 ~ 2300 < 2300		~ 900 ~ 1600 ~ 1600		~ 900 ~ 1800 ~ 1800		~ 900 ~ 1500 ~ 1500		~ 900 ~ 1800 ~ 1800		~ 900 ~ 1600 ~ 1600			
<b>Electrical and Mechanical Properties</b>																		
<b>Orientation of Platelets</b>		⊥		⊥		⊥		⊥		⊥		⊥		⊥		⊥		
<b>Specific Electrical Resistivity</b> [Ohm cm]	> 10 <sup>12</sup>		> 10 <sup>15</sup>		> 10 <sup>15</sup>		> 10 <sup>12</sup>		> 10 <sup>12</sup>		> 10 <sup>14</sup>		> 10 <sup>12</sup>		> 10 <sup>15</sup>			
<b>Bending Strength</b> [MPa]	8	10	4	6	17	21	35	40	40	70	35	65	80	120	80	105		
<b>Young's Modulus</b> [GPa]	20	23	12	12	20	50	25	30	20	35	75	85	30	45	40	60		
<b>Compressive Strength</b> [MPa]	23	22	23	23	50	40	60	52	105	88	130	50	170	170	190	185		

\* Discolorations can occasionally be seen in the material. This has no adverse effect on the material 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.

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