

# SIGRAFINE® R4500

**Material:** Graphite  
**Forming:** Isostatically pressed  
**Application:** Continuous casting

## Material data of SIGRAFINE® R4500

Typical properties	Units	Test standards	Values*
Average grain size	µm	ISO 13320	10
Bulk density	g/cm <sup>3</sup>	DIN IEC 60413/204	1.77
Open porosity	Vol. %	DIN 66133	14
Medium pore entrance diameter	µm	DIN 66133	1.8
Coefficient of permeability (ambient temperature)	cm <sup>2</sup> /s	DIN 51935	0.25
Rockwell hardness HR <sub>5/100</sub>		DIN IEC 60413/303	70
Resistivity	µΩm	DIN IEC 60413/402	14
Flexural strength	MPa	DIN IEC 60413/501	50
Compressive strength	MPa	DIN 51910	110
Dynamic modulus of elasticity	MPa	DIN 51915	10.5 x 10 <sup>3</sup>
Thermal expansion (20 - 200 °C)	K <sup>-1</sup>	DIN 51909	4.2 x 10 <sup>-6</sup>
Thermal conductivity (20 °C)	Wm <sup>-1</sup> K <sup>-1</sup>	DIN 51908	95
Ash content	ppm	DIN 51903	200

\* Typical average values of different rectangular and round block sizes. The actual individual block values might vary depending on dimension and format. For any engineering/design purposes please always contact our technical sales team.



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