

# Product data sheet

## Boron Carbide BOCAREPS™ BC-96

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<b>Description</b>	Boron Carbide BOCAREPS™ BC-96 is produced by the carbothermal reduction of B <sub>2</sub> O <sub>3</sub> in an electric arc furnace. The resulting ceramic product is one of the hardest materials available.		
<b>Applications</b>	<ul style="list-style-type: none"> <li>• Deoxidation agent in refractory and steel</li> <li>• Wear Resistant and Structural Ceramics</li> <li>• Abrasives, Blasting Nozzles, Grinding, Polishing, Lapping Ballistic armour</li> <li>• Tools, Metal matrix composites</li> <li>• Sintering aid: Chemical precursor for the production of boron halides and metal borides</li> </ul>		
<b>Benefits</b>	Boron Carbide is a material made of boron and carbon. Boron Carbide has many benefits, including: <ul style="list-style-type: none"> <li>• It is very hard, making it ideal for use in applications where strength and durability are important.</li> <li>• It has a high melting point, making it resistant to heat and corrosion.</li> <li>• It is an effective abrasive.</li> <li>• It is non-toxic and does not generate harmful fumes when heated.</li> </ul>		
<b>Chemical analysis &amp; physical data</b>	<b>Weight%</b>	<b>Spec*</b>	<b>Typical</b>
	Boron Carbide	min. 95%	
	Total Boron	min. 75,5%	77%
	Total Carbon	max. 22,5%	20%
	Fe	max. 0,2%	0,15%
	B <sub>2</sub> O <sub>3</sub>	max. 0,40%	0,25%
	Hardness Knoop		2900
	Specific Gravity (gr/cc)		2,5
	Thermal Expansion		5 x 10 (4)
	Modulus of Elasticity		64 x 10 (6)
	Modulus of Rupture (psi)		43000
	Compressive Strength (psi)		190000
	* Test methods are available upon request		
<b>Sizes</b>	<ul style="list-style-type: none"> <li>• 0-45 micron</li> <li>• Fepa: F200 up to F800</li> </ul> Other Boron Carbide with customised chemistry and sizing can be produced on request.		
<b>Packaging</b>	The product is available in 25 kg small bags, and various sized big bags. Please contact our sales representative for more details.		
<b>Storage and handling</b>	<ul style="list-style-type: none"> <li>• Avoid dust generation</li> <li>• Store material properly, protected from moisture and contamination</li> </ul>		
<b>Health, safety &amp; environment</b>	Please consult our Product Safety information on our website: <a href="#">Silicon based materials   TDS/SDS Finder   Elkem.com</a>		
<b>Sustainability</b>	For Elkem, sustainability is central to our business strategy. Our mission is to provide advanced material solutions shaping a better and more sustainable future, adding value to our stakeholders globally. We are committed to reduction in embodied carbon emission. For further information, please visit <a href="http://www.elkem.com/sustainability/">www.elkem.com/sustainability/</a> or contact us to learn more about our sustainability roadmap.		
<b>Additional information and contact</b>	For further information, please contact our local sales representative. Our specialists will assist you in solving individual problems.		