

Product data sheet

MICROBLOCK®

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Description	MICROBLOCK® is a slurried/liquid multifunctional microsilica with high surface area. It is specially processed and with quality-controlled particle size distribution (PSD). The specific characteristics of MICROBLOCK®, its small particle size, pozzolanic reactivity and surface area more than 20 m ² /g, make the product an effective gas migration control additive.												
Applications	<p>Whilst originally developed to control gas migration, it imparts several other important properties in a cement slurry like zero free water, low fluid loss, low viscosity, early strength development, high compressive strength, lower set cement permeability, improved bonding, stable cement slurry & corrosion resistance to the cement.</p> <p>The silicon dioxide in MICROBLOCK® is present in an amorphous, non-crystalline state. MICROBLOCK® is for this reason considered non-hazardous to health. The extremely fine particles of MICROBLOCK® work as a “packing” agent (physical and chemical) between other larger particles such as cement, hematite, or silica flour. Regardless of the cement slurry density or downhole temperatures, MICROBLOCK® will prevent settling and free water by binding excess water. MICROBLOCK® improves fluid loss control, by reducing the permeability of the initial cement filter cake.</p>												
Features	<ul style="list-style-type: none"> • Enhances fluid loss control by reducing the permeability of the initial cement filter cake. • Prevents gas migration, allowing for optimum safety during cementing operations. • Reduces operational cost and time by developing an early high compressive strength, excluding forming of free water. • Reduces overall logistic cost by easy usage of bulk management system on rigs and preventing waste. • Guaranteed required amount of total silica by weight of cement, allowing for improved quality slurries. • Proved beneficial in CO₂ wells. 												
Chemical analysis & physical data	<table border="0"> <thead> <tr> <th style="text-align: left;">Typical Physical Properties</th> <th style="text-align: left;">Value</th> </tr> </thead> <tbody> <tr> <td>Specific Gravity</td> <td>1.38 - 1.40</td> </tr> <tr> <td>SiO₂</td> <td>Minimum 90 %</td> </tr> <tr> <td>Particles above 45 micron</td> <td>Maximum 0.1 %</td> </tr> <tr> <td>pH</td> <td>4.0 - 7.0</td> </tr> <tr> <td>Viscosity</td> <td>Maximum 60 mPas</td> </tr> </tbody> </table>	Typical Physical Properties	Value	Specific Gravity	1.38 - 1.40	SiO ₂	Minimum 90 %	Particles above 45 micron	Maximum 0.1 %	pH	4.0 - 7.0	Viscosity	Maximum 60 mPas
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Storage and handling	<p>Packaged in 200-liter drums or 1 m³ IBCs.</p> <p>Avoid freezing as this product becomes unusable after freezing, even if thawed. In accordance with oilfield best practices. Elkem recommends agitating and testing the products before usage in the field.</p>												
Quality assurance	Elkem’s management system is certified to ISO 9001.												
Sustainability	Elkem is committed to reduction in embodied carbon emission. For further information, please contact us to learn more about our sustainability roadmap.												
Additional information and contact	<p>Should you have any questions, please contact an Elkem Silicon Products office near you for more information about the value of our product offering.</p> <p>You can also send us an email at info.oilfield@elkem.no.</p>												