

COBRA



COBRA TECHNOLOGIES B.V.

POROUS CERAMICS

Cobra Technologies BV, Rijssen, The Netherlands

info@cobratechnologies.nl

www.cobraceramicdiscs.com



INTRODUCTION

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Cobra Technologies

- 100% subsidiary of Pervatech BV
- 1999 Established in Enter the Netherlands
- 2014 Scale-up and re-location to Rijssen (NL)
- Long term SCAL collaboration with Laszlo Lombos and Lombos (ERGO) Associates Ltd.



Products

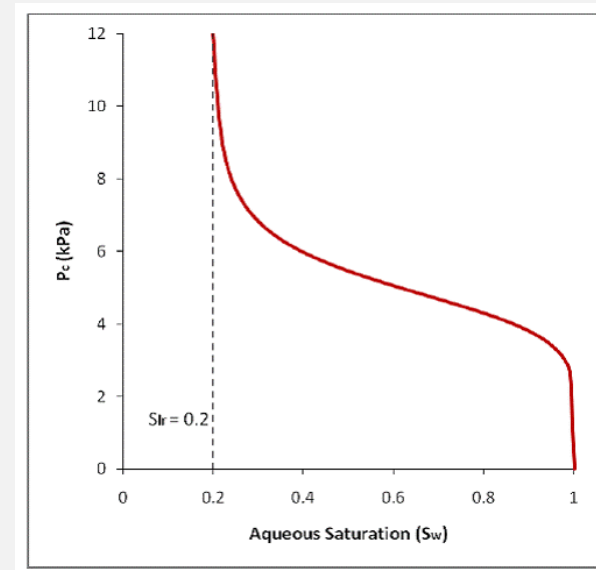
- High quality porous ceramics for:
 - SCAL Special Core Analysis
 - Membranes (development & support)
 - Other. E.g. sensor substrates

(SPECIAL) CORE ANALYSIS, BASIC PRINCIPLES

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- Oil and gas industry needs to characterize the quality of fields with regards to exploration yield and Capillary pressure indication.
- Special Core Analysis (SCAL) technique :
 - Two-phase flow
 - Relative permeability
 - Capillary pressure



Very suitable to test with the high quality, narrow pore size distribution discs from Cobra Technologies BV, which are specifically designed for SCAL procedures either in water-wet or in oil-wet condition.

WHY USE COBRA CERAMICS FOR (SPECIAL) CORE ANALYSIS

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- Products with narrow pore size distribution, enabling application of conventional and unconventional analytical procedures such as very tight gas sand formations with sharp diagnostic procedure
- Due to high quality >99,9% alpha alumina intrinsically highly hydrophilic
- Possibility for rendering to oil-wet throughout the whole internal pore structure of the disc, without fractionation in wettability and risk on surface damage threatening the test results
- Suitable for I-Sw Continuous Injection Technique
- Good reproducibility
- Use of high-quality pure materials, creating high chemical and temperature resistance
- Easier compliance by defined repeatable pore size and effective interconnected pore size structure for highest permeability up to the entry pressure
- Cobra offers development capabilities and flexibility
- Lower costs at the end by reproducibility and quick/ easy selection of discs

COBRA SCAL PRODUCTS

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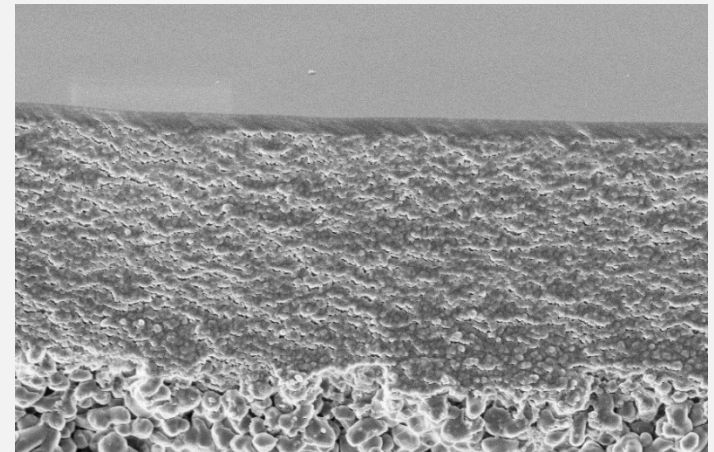
		Entry pressure (N2/water) in bar / psi (theoretical)
Standard products	50nm	57,6 / 835
	80nm	35,5 / 507
	150nm	18,9 / 275

COBRA CERAMICS FOR OTHER APPLICATIONS

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- Membrane technology
 - Uniform pore size distributions in both support and membrane layers,
 - Highly suitable for membrane (development)
 - Polishing possibilities
- Sensors & analytical equipment
 - Good reproducibility
 - Use of high-quality pure materials, creating high chemical and temperature resistance
 - Used as e.g. pre-filter or humidity controller

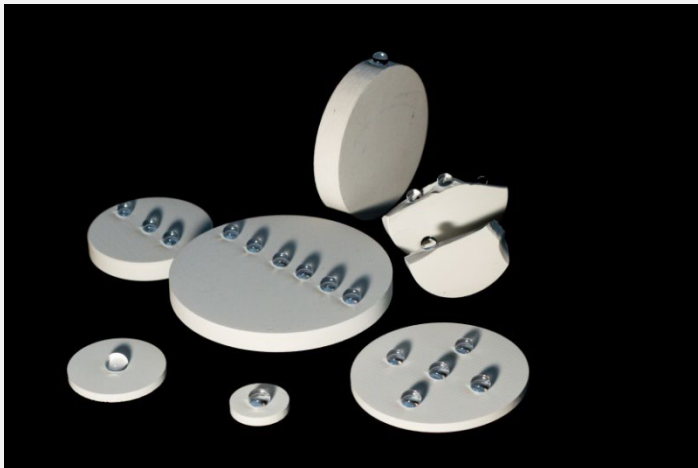


MATERIAL & SPECIFICATIONS

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- High purity Aluminium oxide (alumina, Al_2O_3)
- Different sizes (diameter, thickness)
- Different pore sizes/ entry pressures
- Different characteristics (water-wet & oil-wet)



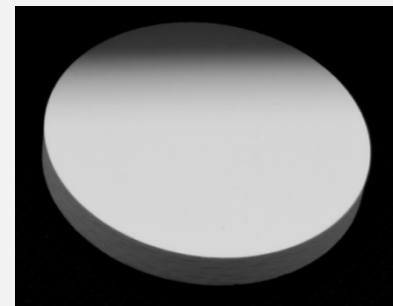
DISC CHARACTERISTICS

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Diameter	13 – 101,6 mm (<4")
Thickness	2 – 7,5 mm
Polishing (option)	Ra < 0,1 μm
Standard deviations on all sizes:	+/- 0,1 mm
Pore sizes, narrow pore size distribution	50, 80 and 150 nm
Material	$\alpha\text{-Al}_2\text{O}_3$ (>99,9%)
Modifications (standard hydrophilic/ water-wet)	Hydrophobic/ oil-wet

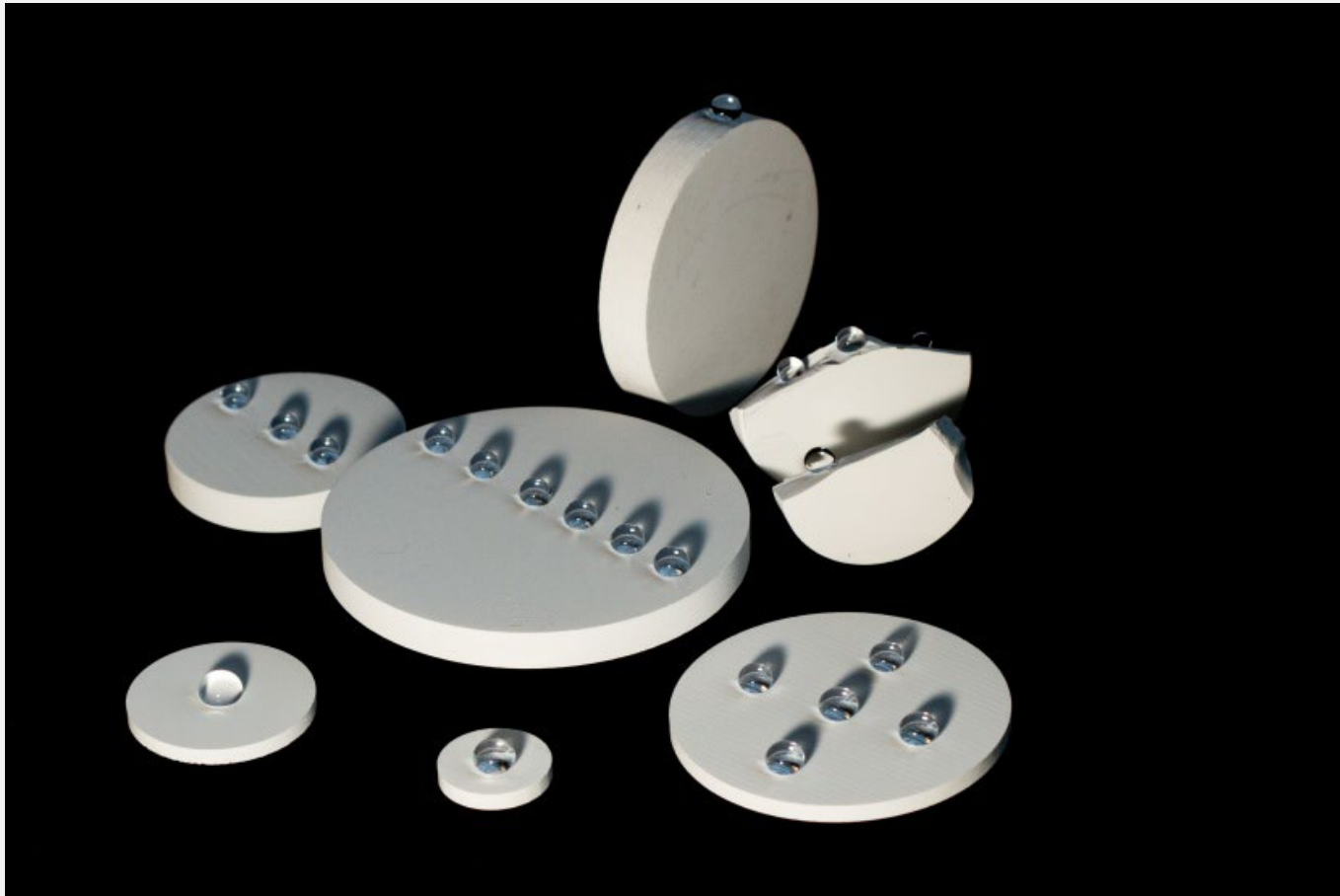
Other specifications on request.





HYDROPHOBICITY ON SURFACE AND INSIDE THE STRUCTURE

COBRA



ROCK HYDROPHOBIZATION

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**PLEASE CONTACT US FOR YOUR SPECIFIC
REQUIREMENTS / NEEDS**

COBRA TECHNOLOGIES

Cobraceramicdiscs.com

info@cobratechnologies.nl

Phone: 0031 548 530368