Datasheet: ceramic discs

The ceramic discs of Cobra Technologies are manufactured from aluminium oxide (alumina, Al_2O_3) and are available in different sizes (diameter, thickness) different characteristics (pore size, water wet, oil wet).

Disc characteristics

Sizes (standard) imperial and metric:	25 – 50.8 mm (1"-2") diameter with 2 – 7.5 mm thickness.
Standard deviations for all sizes:	+/- 0.1mm
	Other sizes up to 101.6 mm (4") with thicknesses up to 10 mm on request.
	Discs can be polished on one side (Ra < 0,1 μm)
Pore sizes:	50 nm, 80 and 150 nm with pore size distribution
Material:	α-Al_2O_3 (high quality alpha alumina, >99%)
Available modifications:	Oil wet (hydrophobized) discs
Special coatings on request:	γ-Al_2O_3 (3-5 nm), meso-TiO_2 (3.5-15 nm), micro-TiO_2 ($\approx$1.0
Pore sizes in parentheses	nm), SiO_2 (<0.5 nm), hybrid silica (<0.8 nm)

Theoretical entry pressure

50	nm	57,6 bar / 835 PSI
80	nm	35,5 bar / 507 PSI
150	nm	18,9 bar / 275 PSI

Limits of operation

Temperature:	1000 °C (exceptions: hydrophobic discs, certain coated discs)
Pressure:	Depending on morphology
pH:	1-14 (may differ for certain coatings)

Temperature, pressure en pH values are influenced by type of solvent/ medium during use. Contact Cobra Technologies for further information.

Storage and cleaning

Storage
No special storage is required. Keep the discs clean and dry.

Cleaning
Pure alumina discs, without any modification or coatings, depending on contamination can be rinsed with distilled water, ethanol and acetone, followed by drying at 200 °C for 3h. If the organic contamination is more persistent heat up to 800-1000 °C for 3h.
For the modified and coated discs please request a specified cleaning procedure.