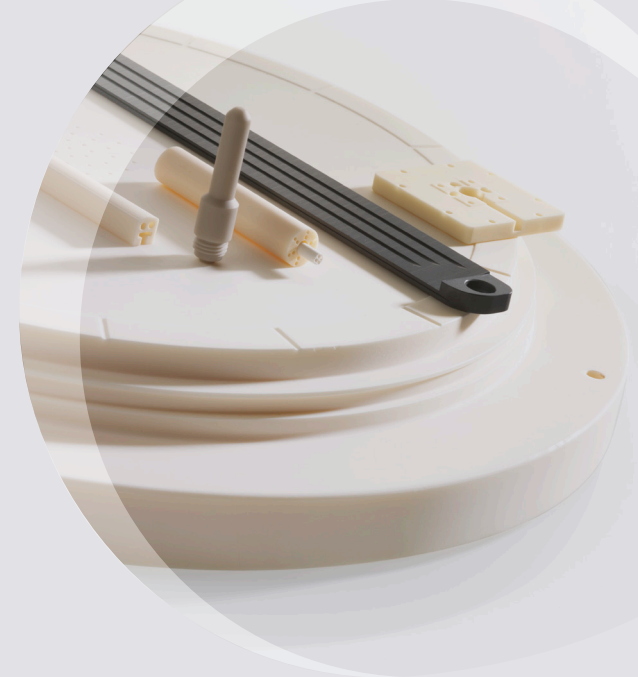


C-TECHNOLOGY BV

As a leader in the industry, C-Technology bv has a wealth of knowledge and expertise that's incomparable for technical ceramics and quartz. We utilize this experience to provide both companies and individuals with quality and innovative products they can truly count on.

In addition, we ensure that we stay ahead of the industry curve by using the latest technologies. Rest assured that no matter what you need, you can rely on us to provide the absolute best. Keep browsing through our site to learn more.



		ALUMINA					ZIRCONIA		SILICIUM CARBIDE		SILICIUM NITRIDE	ALUMINIUM NITRIDE			MACHINABLE GLASS		Quartz
	Dimension unit	CT92	CT96	CT997	CT999	CT997P	Y ₂ O ₃ -ZrO ₂	MgO-ZrO ₂	SSiC	SiSiC	Si ₃ N ₄	ALN 180	Machinable ALN 92	Machinable shapal	MGC	Macor	Quartz
Classification as per DIN ISO	-	C 786	C 795	C 799	C 799	-	C 800	C 800	-	-	C935	C910	-	-	-	-	-
Main component	Weight - %	92% Al ₂ O ₃	96% Al ₂ O ₃	99,7% Al ₂ O ₃	99,9% Al ₂ O ₃	99,7% Al ₂ O ₃	94% ZrO ₂	96,5% ZrO ₂	99,9% SiC	85% SiC	99,9% Si ₃ N ₄	99% ALN	71-74% ALN	71-74% ALN	-	-	99,98% SiO ₂
Colour	-	White	White	Ivory	Ivory	White	White	Yellow	Gray/black	Gray/black	Gray	Gray	Gray	Gray	White	White	Clear
Density	gcm-3	3,65	3,78	3,90	3,96	2,80	6	5,6	3,16	3,03	3,2	3,3	2,9	2,9	2,58	2,52	2,2
Open porosity	Vol - %	0	0	0	0	20-30	0	0	0	0	0	0	<0,1	0	<0,1	0	0
Bending strength	MPa	>300	>300	>370	>480	>50	>900	>600	>400	>350	>750	>350	300	300	>90	>90	>60
Compressive strength	MPa	2450	-	2500	2500	-	-	-	3500	2000	3820	-	1170	1200	488	345	1150
Module of elasticity	GPa	>290	>300	>380	>400	-	>200	>200	>270	>300	>300	>320	-	-	65	66,9	-
Vickers hardness	Nmm-2	>15.000	>15.000	>17.000	>19.000	-	>12.000	>10.000	>25.000	>24.000	>13.500	>10.500	-	-	-	-	>8.000
Fracture toughness	MPa ml/2	4	4	4	5	-	7	8	4	4	6,5	-	-	-	-	-	-
Weibull modulus	-	10	12	15	20	-	20	16	12	-	-	-	-	-	-	-	-
Linear thermal expansion coefficient	10-6 K-1	8,2	8,2	8,5	8,5	-	11	11	4,1	4,5	2,9	4,6	4,5	4,4	8,6	7,4	5,7
Thermal conductivity	Wm-1 K-1	22	26	30	35	-	2,5	3	120	125	20	170-180	92	90	1,68	1,46	1,4
Max. working temperature in air	°C	1550	1600	1700	1700	1600	1000	1000	1700	1300	1150	1000	1000	1000	800	800	1100

The values were determined on test specimen and are typical for the respective material. The product attributes can vary depending on the design and production process. Other materials are available on demand.

Al₂O₃

Feature

- high wear and high heat resistance
- high corrosion resistance
- good electrical insulation
- high mechanical strength
- comparatively low price

Application

- wear resistant liner
- components for textile and paper manufacturing
- heat resistant components
- pump parts and mechanical seal
- components for semiconductor production
- electrical insulation parts

ZrO₂

Feature

- high wear resistance
- high fracture toughness
- brilliant surface
- low thermal conductivity

Application

- wire and pipe extension
- various dies for extrusion
- various guide rollers and cutters
- various valves for air and fluid pressure

SiC

Feature

- high wear corrosion and oxidation resistance
- high thermal conductivity
- not lowering in strength at high temperatures

Application

- mechanical seal and bearing
- chemical pump parts
- milling machine liner
- burner and nozzle
- heat exchanger

Si₃N₄

Feature

- high thermal shock resistance
- high mechanical and bending strength at high temperatures
- high wear and corrosion resistance

Application

- heat exchanger and burner nozzle
- reaction tube
- bearing and guide roller
- pin chuck, location and welding jig

ALN

Feature

- High thermal conductivity properties
- Good electrical performance
- High chemical resistance

Application

- Microwave parts
- Heat sinks
- Semiconductor parts
- Evaporation boats