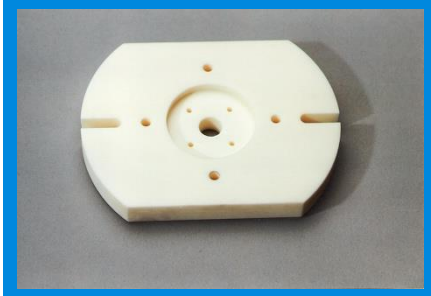
DATA SHEET
Rev. N° 0 - 05.06.2023



1AS.010
Machinable Alumina

Applications

- Prototypes, brazing
- Fixings for welding, vacuum applications, HF heating
- Various supports
- Electrical components, insulators.

Physical variables included in this documentation are provided by way of indication only and do not, under any circumstances, constitute a contractual undertaking. Please contact our technical service if you require any additional information.

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Overview

Machinable alumina is ready-to-use and requires no thermal treatment. However, Cotronics®960 hardener can be used for the improvement of surface resistance, with a heat treatment at 320 °C. This ceramic can withstand temperatures up to 1,650 °C, and is resistant to molten metals, acids, solvents and thermal impacts. This material is employed, in the ready-to-use state, in the electrical and electronic industries, in metallurgy, and in high-temperature vacuum technologies.

Final Advanced Materials can supply ceramic bars or plates for your own use, but it is also possible for us to undertake the complete execution of your project.

Available Products

Type	Dimension
Plate	from 6 mm x 150 mm x 150 mm to 19 mm x 150 mm x 150 mm
Rod	from Ø6 mm x 150 mm to Ø88 mm x 300 m
We machine your parts according to your drawings.	

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Technical Data

Property		Unit	Machinable Alumina
Item N°			960
Composition	Al_2O_3	%	96 %
	SiO_2		≈ 2,6
	MgO		≈ 1
	CaO		≈ 0,2
	Fe_2O_3 – K_2O – Na_2O – TiO_2 – SrO – B_2O_3 – Cr_2O_3		Possible traces
Density		g/cm³	3.0
Porosity		%	10
Hardness on Mohs' scale			5
Compressive Strength		MPa	414
Flexural Strength		MPa	262
Max. Peak Temperature		°C	1,650
Thermal Conductivity at 20 °C		$W.m^{-1}.K^{-1}$	4.6
Expansion Coefficient		$10^{-6}/K$	7.74
Electrical Resistivity at 20 °C		Ω.m	10^{12}
Dielectric Constant at 20 °C for 1 MHz			9
Loss Tangent at 1 kHz			0.0016
Dielectric Strength at 20 °C		kV/mm	7.8
Corrosion Resistance at 20 °C			good
Alkali Resistance at 20 °C			good

Rescor 960 is a mining material subject to change.

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