KALOCER SHD

High Alumina Ceramics

Material data sheet

General material description

KALOCER SHD an oxide ceramic material which is characterized by outstanding abrasion resistance and extraordinary micro-impact resistance. KALOCER SHD is suitable for applications where very high temperature loads occur and where very high chemical resistance is required. KALOCER SHD can be manufactured in very thin molded parts, which saves space and weight. Its smooth surface promotes the sliding properties. KALOCER SHD is manufactured in the delivery forms of plates, shaped components and cylinders. The KALIMPACT KALOCER hard rubber composite is recommended for high macro impact resistance.

Material properties

Feature	Unit	Data
Chemical composition	Wt.-% Al_2O_3	≥ 95
Hardness	Vickers HV1	1 400
Density	g/cm³	≥ 3,7
	lb/ft³	≥ 231
Open porosity	%	< 1
Thermal coefficient of expansion	K^{-1} (20 - 1000 °C)	$8.0x10^{-6}$
	$°F^{-1}$ (68 - 1832 °F)	$4.44\ x10^{-6}$
Thermal conductivity	W/mK (20 – 300 °C)	26
	Btu inch/ft² h (68 - 572°F)	180
Max. application temperature	°C	1400
	°F	2552
Max. thermal shock resistance	K/h	120
	°F/h	216
Wear resistance acc. ASTM C704-15	cm³ with 90°	≤ 0.6

Approximate figures are given for all technical data. They are based on assessment of tests on specific samples and cannot be considered as a guarantee for which Kalenborn would have to assume legal responsibility. Subject to technical changes and errors.

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Installation

- Shaped components or thin tiles laid in KALFIX synthetic mortar
- KALOCER SHD tiles vulcanized into rubber mats for installation by gluing are available
- Mechanical fixing (screwing and welding) is also possible

Advantages

- Highly wear resistant
- Extraordinary micro impact resistance
- Very high application temperatures
- Smooth surface that lasts
- No corrosion
- Available from 1.5 mm thickness

Applications from energy and the environment, cement and building materials, iron and steel, mining and other industries

bunkers
chain conveyors
circulating air separators
conveyor centrifuges
conveyors (pneumatic, hydraulic, mechanical)
cyclones
fans and fan housing
mixers (pan mixers and other mixer types)
separators
sifters
transfer chutes
valves
vibro chutes
wet ash extractors

Due to the manufacturing process, it is not possible to exclude small variations in the properties of the product. This affects tolerances in the size, outer appearance and surface finish. Included are some typical features such as spalling, cavities, porosity and hairline cracks, all of which can be present within the range of specified tolerances.