

# KALDETECT Visual KALCRET

## Material data sheet

### Material description in general

When using KALDETECT Visual indicator stones of different heights they are integrated in a lining with KALCRET hard compound. With increasing wear, the colored blue indicator stones become visible and provide information about the remaining wear thickness.

Monitoring of the lining is thus optically supported without weakening the lining.

### Characteristics of the installed material

Feature	Unit	Data
Proportion of hard material	Wt.-%	≥ 70
Color body	Wt.-%	≤ 2
Density	g/cm <sup>3</sup> lb/ft <sup>3</sup>	2.7 169
Thermal coefficient of expansion	K <sup>-1</sup> (20 - 400 °C) °F <sup>-1</sup> (68 - 660 °F)	2.7 x 10 <sup>-6</sup> 1.5 x 10 <sup>-6</sup>
Thermal conductivity	W/mK (20 - 400 °C) BTU-in/hr-ft <sup>2</sup> -68°F	2.5 17.3
Max. application temperature	°C °F	1000 1832
Max. thermal shock resistance	K/h °F/h	300 540
Wear resistance acc. ASTM C704-15	cm <sup>3</sup> at 90° angle	≤ 4.5
Wear abrasion resistance acc. 52108	cm <sup>3</sup>	1.5 - 2
Wear erosive resistance	min/cm <sup>3</sup>	90

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.

Due to the manufacturing process, it is not possible to exclude small variations in the properties of the product. They also include typical characteristics of hydraulically setting products like temperature- and application-related fluctuations. This has an effect on the working, hardening, and product properties. With prefabricated elements these variations may include, but are not limited to tolerances of dimension, surface finish, chipping, voids, porosity, and hairline fractures.

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### Installation

KALDETECT KALCRET indicator blocks are fixed to the base of the structure with KALFIX adhesive. The position is based on the desired installation plan of the stones.

The following dimensions are available as standardised system sizes:

Lining KALCRET incl. wire mesh mm	Indicator area (blue) Ø mm	Indicator (blue) heights in mm
20	<b>20</b>	<b>15</b>
30	<b>25</b>	15/ <b>20</b>
40	<b>30</b>	15/ <b>20/30</b>
50	<b>40</b>	15/ <b>20/30/40</b>

KALDETECT Visual KALCRET can be installed at the Kalenborn plant or on site.

A comprehensive range of tools and accessories is available for safe installation, and detailed instructions are available at [https://www.kalenborn.com/fileadmin/Redakteur/PDF/DE/D\\_Handbuch\\_KALCRET.pdf](https://www.kalenborn.com/fileadmin/Redakteur/PDF/DE/D_Handbuch_KALCRET.pdf)

### Advantages

- Highly resistant to abrasion and compressive stress
- High micro impact strength
- Continuous lining
- Fast lining
- By short start-up and reaction times a quick application is possible

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

bunkers

channels

chutes

cyclones

deviation hoods

dust collecting ducts

gas purifying systems

hoppers

hydraulic conveying systems

pipe bends

pipes

pneumatic conveying systems

separators

silos

vessels