

KALCRET hard compound

TIME FOR BETTER WEAR PROTECTION



WEAR-RESISTANT HIGH-PERFORMANCE CONCRETE

KALCRET is a wear-resistant, high-performance concrete made of high-strength hard aggregates in an extremely strong cement matrix. The improved compound is matched to the specific requirements and provides maximum resistance to erosion and abrasion.

KALCRET is the leading cement-bonded hard aggregate compound on the market.

KALCRET combines excellent wear protection properties with ease of use. The specific advantage of all compound materials is their flexibility in practice. Large surfaces can be coated quickly and reliably to restore plant availability rapidly.

KALCRET is suitable for lining plant components and pipe systems, including in environmental engineering applications such as air and water filtration plants, in waste incineration plants, in power plants, in plants that produce construction materials, in cement works, and in the steel industry.

Simplicity and versatility in use



KALCRET trowelled compound can be used to protect horizontal, vertical, inclined and curved surfaces. It can also be safely applied overhead.



KALCRET casting compound is the material of choice when flat surfaces are to be protected against wear or where it is possible to use formwork.



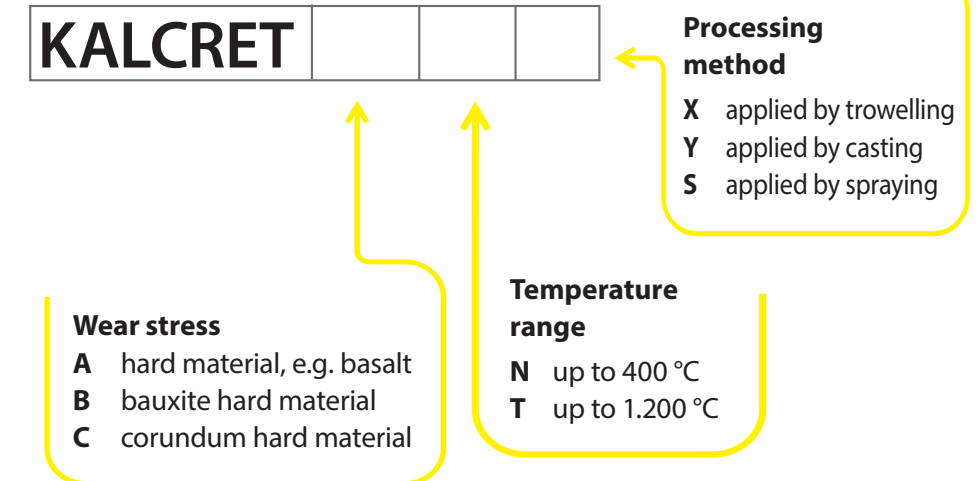
KALCRET sprayed-on compound makes it possible to line even large surfaces very quickly. And it is easy to apply overhead.



KALCRET VARIANTS A, B AND C – FOR ALL CASES

Depending on wear loading, service temperature and possible processing, the KALCRET variants cover a wide range of applications.

KALCRET - The wear protection material out of a bag



KALCRET B is erosion-optimized



Its structural composition provides maximum erosion resistance and good abrasion resistance. This outstanding erosion resistance is achieved with a bauxite base, which is embedded in a high-strength cement matrix.

KALCRET C is abrasion-optimized



Its structural composition provides maximum abrasion resistance and good erosion resistance. This outstanding abrasion resistance is achieved with a corundum base. The high hardness and shape of the hard aggregate material makes it significantly more abrasion-resistant than comparable products.

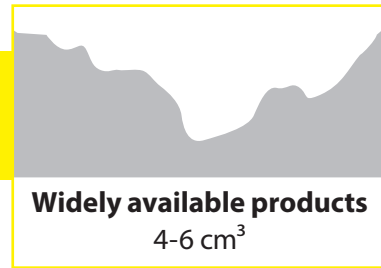
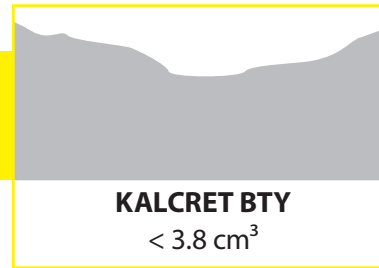
KALCRET A is cost-optimized

Its structural composition provides good abrasion and erosion resistance and consists of a high-strength cement matrix with basalt, bauxite and corundum hard materials. This variant provides impressive performance at an inexpensive price.

KALCRET complies with strict international erosion resistance wear testing requirements according to ASTM-C704-15 and ASTM G65 as well as abrasion resistance wear testing requirements according to Böhme DIN 52108.

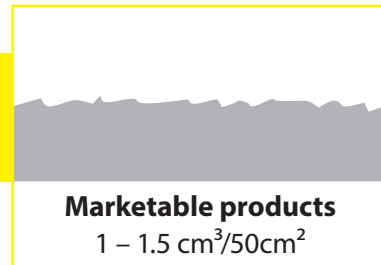
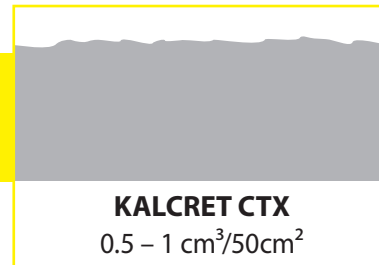
BEST PERFORMANCE ON THE MARKET

Erosion wear
according to ASTM C704-15



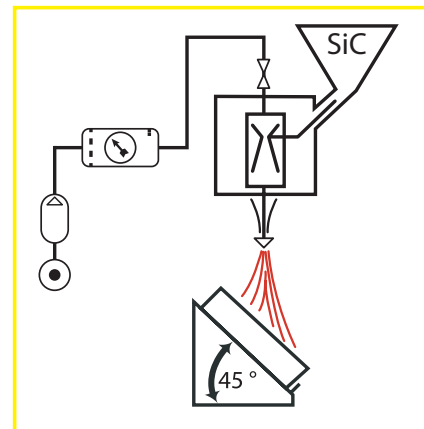
Less volume loss means better erosion resistance.

Abrasion wear
according to Böhme DIN52108



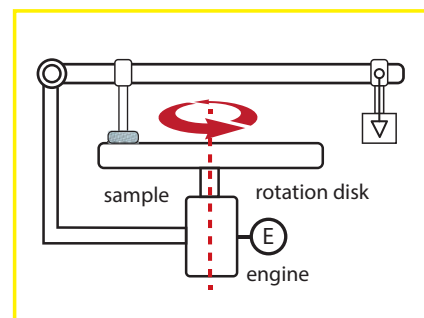
Less volume loss means better abrasion resistance.

INTERNATIONAL WEAR TESTS GUARANTEE QUALITY



ASTM-C704-15
Standardised test

The loading under ASTM-C704-15 in the standard angle 90° is mainly erosion. The angle settings can vary according to the application. The specimen is blasted with a specified quantity and quality of blasting material for a specified period of time and at a specified pressure. The result is the material loss, measured in cm^3 .



Böhme DIN 52108
Standardised DIN test

The loading in the Böhme test is mainly abrasion. The specimen is pressed on a specified rotating disk with specified grinding media. The specimen is processed for a specified period of time. The result is the material loss, measured in $\text{cm}^3/50 \text{ cm}^2$.

KALCRET SUPPORTS SUSTAINABLE PAPER PRODUCTION

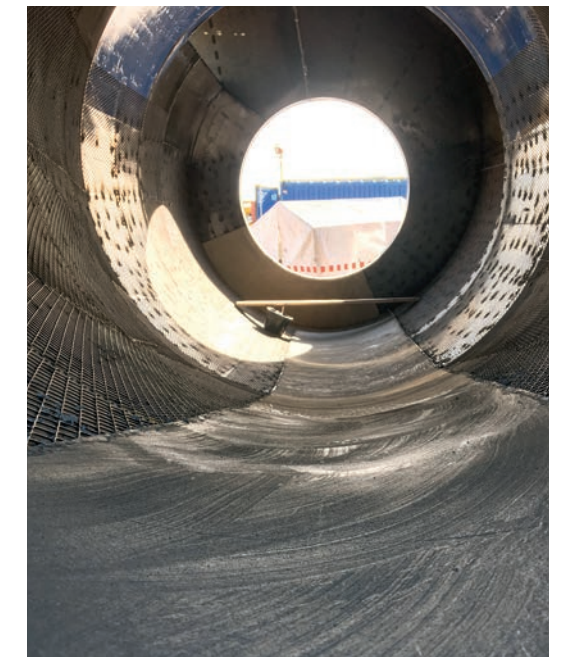


In the course of a modernisation project, one of the leading paper manufacturers in Europe uses a cogeneration plant to produce energy from production waste. Sustainable paper production is a high priority for the company.

A pre-separator in the flue gas purification system filters out coarse dust particles. A KALCRET lining reduces wear, safeguards plant availability, and helps the operation comply with the strict emission limits of the flue gas purification unit.

Technical characteristics

Industry	Paper manufacturing
Application area	Flue gas purification unit
Plant component	Pre-separator for fluidised bed boiler
Conveyed material	Dust particles
Lining material	KALCRET CNX
Lining thickness (mm)	25
Base material	Steel
Fastening method	Wire mesh with visible blue KALDETECT indicator stones for wear protection monitoring (see photo below right)
Wear	Abrasion and erosion
Operating temperature (°C)	up to 400
Diameter (mm)	up to 4,000
Lining area (m ²)	approx. 150





KALCRET FREES WASTEWATER GUTTERS OF SOLIDS

An inclined screw conveyor running through a nine-metre-long trough conveys wastewater to a settling basin. The equipment there is subject to high wear due to solids such as sand, stone and rubbish along with exposure to chemical substances.



The concrete that previously lined the trough showed considerable damage. Using KALCRET, the affected areas of the trough were repaired rapidly and inexpensively. The customer has been impressed by the service life now, which is significantly longer than with conventional concrete repair.



Scan QR code for further applications



Properties at a glance

- **Wear protection for application by trowel, casting or spraying**
- **Lining of large surfaces without joints**
- **Easy lining of geometrically challenging surfaces**
- **Variable layer thickness**
- **Operating temperature max. 1200 °C**
- **Full loading capacity after just 24 hours**
- **Easily combinable with all other materials**
- **Repairs can be carried out easily**

KALCRET.

Quality made in Germany

Kalenborn produces up to 4000 tonnes of KALCRET in Germany every year and endeavours to continuously optimise the properties and manufacturing processes of the materials.

Click here for the manual that shows how to handle the product correctly



With material testing and wear tests according to international standards – independently verifiable – we ensure the product quality and durability of KALCRET. To support specific projects, we take quality assurance samples on request and establish the correct processing conditions during installation.



