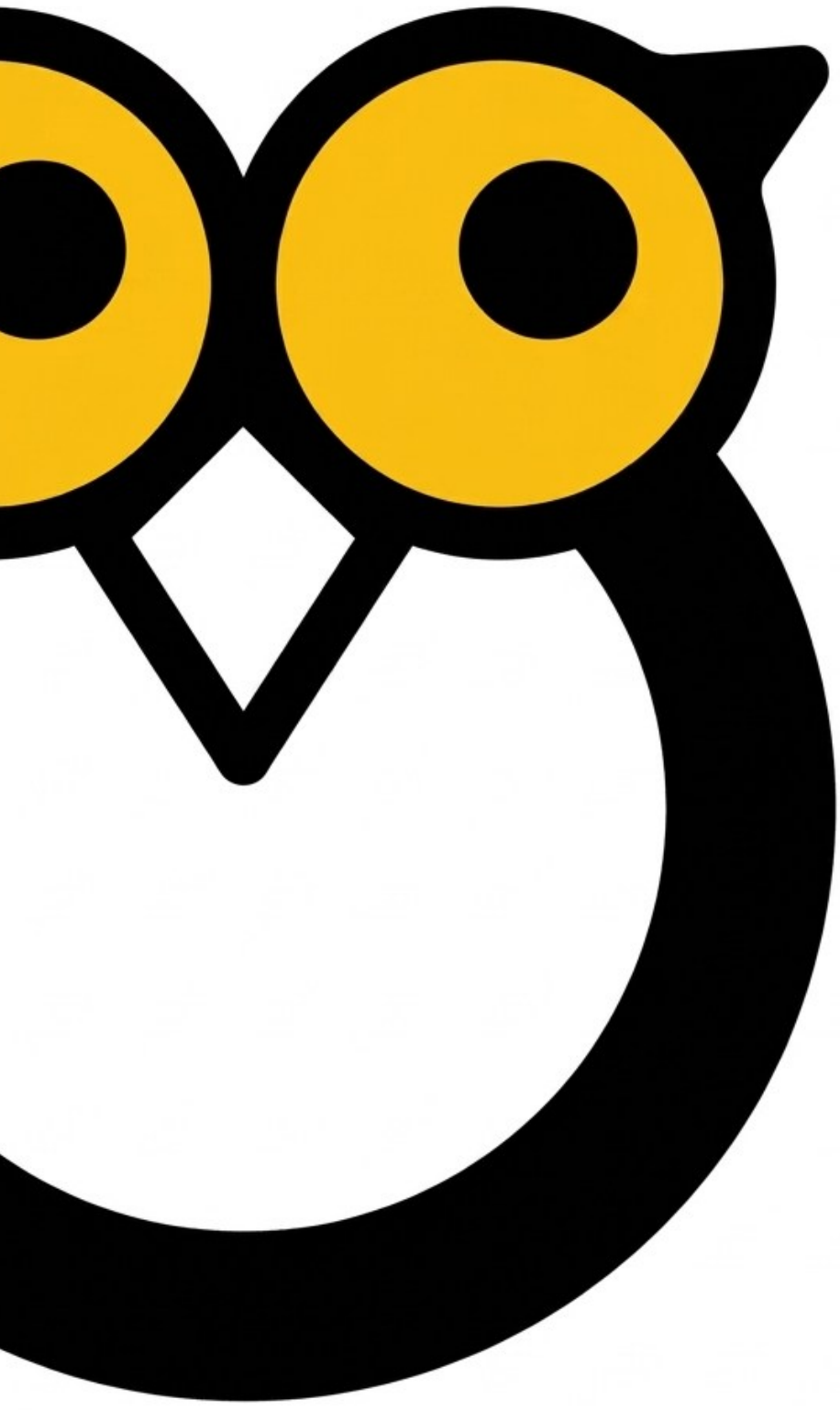
KeraTech



CATALOGUE

Our history

With over 30 years' experience and the commitment to continous improvement, Keratech consolidates its position in the production of refractory rollers.

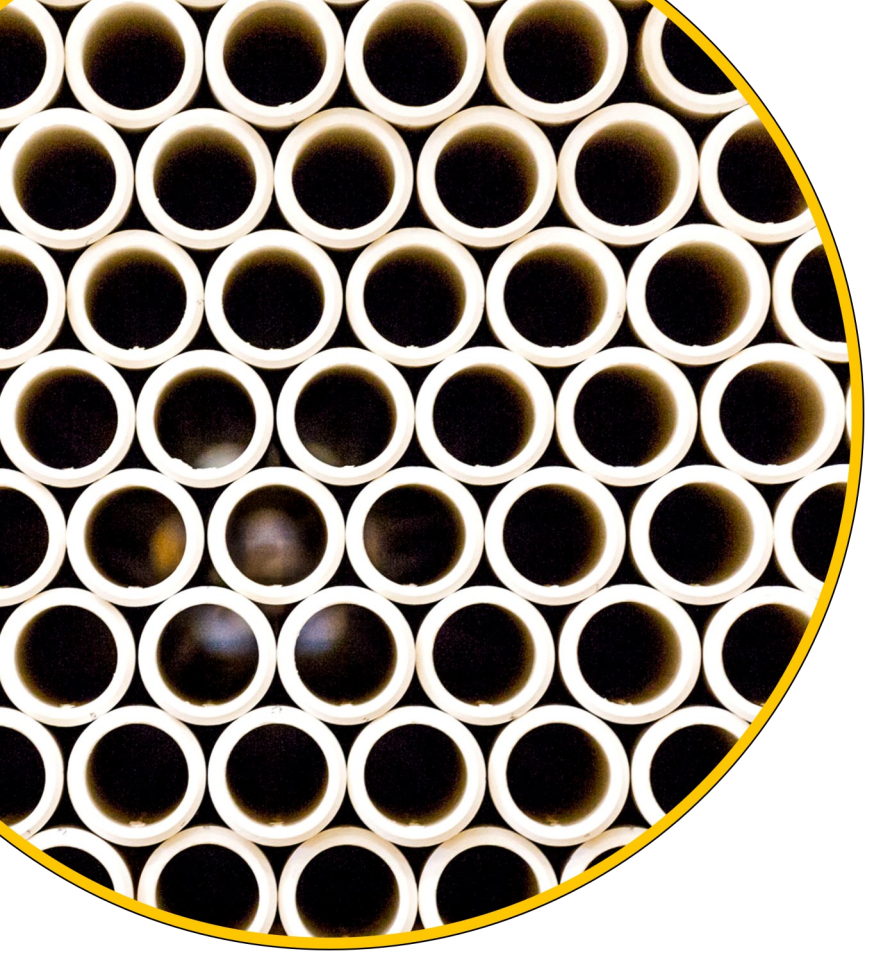
The enthusiasm of experts has forged a solid and trustworthy company. Constant technological innovation and the assimilation of know-how have enabled the company to grow and achieve a leading position on the market. The company provides a comprehensive range of products suitable for use in every zone of the kiln.

In recent years, Keratech has created innovative ceramic rollers with working specifications that are hard to find elsewhere.

Keratech products are known for their exceptional resistance to bending and to chemical attack, as well as for their versatility and stability. Special care is always taken to ensure compliance with the technical and dimensional specifications of the product.

Customers are consistently assured of top-quality standards, innovative and customized solutions, and comprehensive technical support in all phases of the supply chain.

Keratech has always focused on a quality-oriented industrial policy. The professional standards of its activity are guaranteed by the UNI EN ISO 9001 Quality Management System. The challenge set by sustainable development has further increased the company's commitment to environmental responsibility. Keratech views this as an important issue and has adopted solutions that, while utilizing advanced technology, are environment friendly throughout every stage of the production processes, in accordance with UNI EN ISO 14001 Environmental management systems.



Ceramic rollers

Versatility & stability

CERAMIC ROLLERS							
Model	**Roller categories**	**Bulk density (Kg/dm^3)**	**Apparent porosity (%)**	**Absorbed water (%)**	**M.O.E. 20°C (GPa)**	**Al_2O_3 content (%)**	**Thermal expansion 20 - 400 °C 20 - 1000 °C ($x10^{-6}K^{-1}$)**
KM 250	Semi-Technical	2,6	21	10	> 85	77	4,9 6,05
KM 301 AR	Technical	2,7	19	6,5	> 93	78	5 6,1
KM 306 SH	Super Technical	2,85	16	5,5	> 105	78	5 6,2
KM 25 – 20	Super Technical	2,8	17	6	> 105	70	4,5 5,5
KM 610 SHD	Super Technical	2,95	14	5	> 115	78	5,3 6,25
KM RL-MU80	Technical	2,7	17	6	> 110	75	4,5 5,5
KM RR-LTE	Special Products	2,4	17	7	> 55	25	2,3 3,15
KM FF 05 - 23	Special Products	2,20	19	8,5	> 55	50	2,4 3,3
VECTOR	Special Products	2,85	16	5,5	> 105	78	5 6,2
RIGATO	Special Products	2,8	17	6	> 105	70	4,5 5,5

Technical specifications

Keramull KM 250

Semi-technical roller. Suitable for low and medium loads. It is the ideal product in order to manufacture single and double-fired tiles.

Mineralogical composition

- Corundum
- Mullite
- Zirconia

Type

Semi-Technical

Al_2O_3 content	77%
Bulk density	2.60 Kg/dm^3
Apparent porosity	21.0%
Absorbed water	10.0%
M.O.E. 20°C	> 85 GPa
Thermal expansion 20-400°C	$4.9*10^{-6}K^{-1}$
Thermal expansion 20-1000°C	$6.05*10^{-6}K^{-1}$

Typical use

- Single firing
- Double firing
- Gres



Keramull KM 301 AR

Very versatile technical roller characterized by a good resistance to chemical attack. Thanks to its chemical-physical characteristics it is recommended not only for the most subjected zone to chemical attack but also for the firing zone for low and medium loads.

Mineralogical composition

- Corundum
- Mullite
- Zirconia

Type

Technical

Al_2O_3 content	78%
Bulk density	2.70 Kg/dm^3
Apparent porosity	19.0%
Absorbed water	6.5%
M.O.E. 20°C	> 93 GPa
Thermal expansion 20-400°C	5.0*10^{-6}K^{-1}
Thermal expansion 20-1000°C	6.1*10^{-6}K^{-1}

Typical use

- Single firing
- Double firing
- Gres



Technical specifications

Keramull KM 306 SH

High modulus of elasticity, very low porosity and an extremely low vitreous phase. The roller is suitable both for the pre-firing and firing zones, for the production of large and heavy tiles. It ensures proper alignment and transport of the tiles.

Mineralogical composition

- Corundum
- Mullite
- Zirconia

Type

Super-Technical

Al_2O_3 content	78%
Bulk density	2.85 Kg/dm^3
Apparent porosity	16.0%
Absorbed water	5.5%
M.O.E. 20°C	> 105 GPa
Thermal expansion 20-400°C	5.0*10^{-6}K^{-1}
Thermal expansion 20-1000°C	6.2*10^{-6}K^{-1}

Typical use

- Single firing
- Grès
- Extruded tiles



Technical specifications

Keramull KM 25-20

Roller characterized by exceptional operational stability and versatility: very low thermal expansion coefficient, high resistance to thermal shock and chemical attack. High elastic modulus, stable across the entire temperature range. Suitable for the production of tiles with a thickness of up to 20 mm.

Mineralogical composition

- Corundum
- Mullite
- Zirconia

Type

Super-Technical

Al_2O_3 content	70%
Bulk density	2.80 Kg/dm^3
Apparent porosity	17.0%
Absorbed water	6.0%
M.O.E. 20°C	> 105 GPa
Thermal expansion 20-400°C	4.5*10^{-6}K^{-1}
Thermal expansion 20-1000°C	5.5*10^{-6}K^{-1}

Typical use

- Pre-firing
- Firing



Technical specifications

Keramull KM 610 SHD

Extremely high modulus of elasticity stable across the entire temperature range. Excellent for use in the firing zone.
Designed for the production of very heavy tiles with a thickness of up to 30 mm.

Mineralogical composition

- Corundum
- Mullite

Type

Super-Technical

Al_2O_3 content	78%
Bulk density	2.95 Kg/dm^3
Apparent porosity	14.0%
Absorbed water	5.0%
M.O.E. 20°C	> 115 GPa
Thermal expansion 20-400°C	5.3*10^{-6}K^{-1}
Thermal expansion 20-1000°C	6.25*10^{-6}K^{-1}

Typical use

- Single firing
- Grès
- Extruded tiles
- Tableware



Technical specifications

Keramull KM RL-MU80

Roller for the slow and final cooling zones. It ensures a very good alignment and transport of the tiles. The roller can also be used in dryers and pre-kiln at temperatures of up to 1000°C.

Mineralogical composition

- Corundum
- Mullite

Type

Technical

Al_2O_3 content	75%
Bulk density	2.70 Kg/dm^3
Apparent porosity	17.0%
Absorbed water	6.0%
M.O.E. 20°C	> 110 GPa
Thermal expansion 20-400°C	4.5*10^{-6}K^{-1}
Thermal expansion 20-1000°C	5.5*10^{-6}K^{-1}

Typical use

- Designed for use from the slow cooling zone to the kiln exit. Suitable for all types of tiles both thin and thick.
- Thanks to its specific characteristics the roller can also be used in dryers and pre-kiln at temperatures of up to 1000°C. It ensures optimal support and proper tile alignment.



Technical specifications

Keramull KM RR-LTE

Silicon-carbide based roller, designed for use in the rapid cooling zone of the kiln. It is characterized by a high resistance to oxidation and can operate at temperatures of up to 1000°C. Thanks to its high thermal conductivity and low coefficient of thermal expansion, it ensures maximum stability under temperature variations.

Mineralogical composition

- Silicon carbide
- Cordierite

Type

Special Products

Al_2O_3 content	25%
Bulk density	2.40 Kg/dm^3
Apparent porosity	17.0%
Absorbed water	7.0%
M.O.E. 20°C	> 55 GPa
Thermal expansion 20-400°C	2.3*10^{-6}K^{-1}
Thermal expansion 20-1000°C	3.15*10^{-6}K^{-1}

Typical use

- Rapid cooling zone
- Final cooling (RCC)



Technical specifications

Keramull KM FF 05-23

Roller characterised by a very low coefficient of thermal expansion, providing excellent stability even under significant temperature variations (ΔT).

Mineralogical composition

- Corundum
- Mullite
- Cordierite

Type

Special Products

Al_2O_3 content	50 %
Bulk density	2.20 Kg/dm^3
Apparent porosity	19.0%
Absorbed water	8.5 %
M.O.E. 20°C	> 55 GPa
Thermal expansion 20-400°C	2.4 * 10^{-6} K^{-1}
Thermal expansion 20-1000°C	3.3 * 10^{-6} K^{-1}

Typical use

- "Semianello": zone between the maximum working temperature and the beginning of rapid cooling



Vector

Thanks to its different peripheral speeds, this roller is capable of aligning the advancement of the tiles before the material reaches the firing zone.

Mineralogical composition

- Corundum
- Mullite
- Zirconia

Type

Special Products

Al_2O_3 content	78%
Bulk density	2.85 Kg/dm^3
Apparent porosity	16.0%
Absorbed water	5.5%
M.O.E. 20°C	> 105 GPa
Thermal expansion 20-400°C	5.0*10^{-6}K^{-1}
Thermal expansion 20-1000°C	6.2*10^{-6}K^{-1}

Typical use

- Pre-firing



Rigato

Roller recommended for the production of very large and thin tiles. Its special geometry reduces the contact surface between the roller and the tile.

Mineralogical composition

- Corundum
- Mullite
- Zirconia

Type

Special Products

Al_2O_3 content	70%
Bulk density	2.80 Kg/dm^3
Apparent porosity	17.0%
Absorbed water	6.0%
M.O.E. 20°C	> 105 GPa
Thermal expansion 20-400°C	4.5*10^{-6}K^{-1}
Thermal expansion 20-1000°C	5.5*10^{-6}K^{-1}

Typical use

- According to customer requirements



Upon request

Plug

The refractory plug is made from a powder obtained by grinding the scraps of the rollers.
It is installed on the drive side to protect the mechanical parts. It can also be installed on the idle side, in which case it is provided with a vent hole.

Available upon request.





Alumina-based powders

Abrasive refractory powders

Technical specifications

Kerasand

Alumina-based powder for refractory and abrasive use. Available grain sizes: 0 - 1 mm, 0 - 0,5 mm, 0 - 0,3 mm.

Following further grinding and a spray drying process a grain size of 0 - 50 µm can be obtained.

Mineralogical composition

- Corundum
- Mullite
- Zirconia

Type

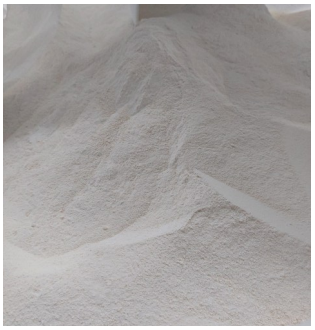
Special Products

Al_2O_3	≥ 75%
SiO_2	≥ 17%
ZrO_2	≥ 5%
Fe_2O_3	≤ 0,25%

Chemical analysis

Corundum	31%
Mullite	64%
Badelleyite	5%
Glassy phase	Traces

Diffractometric analysis



Aluminous powders



Spray-dried powders (microscope)

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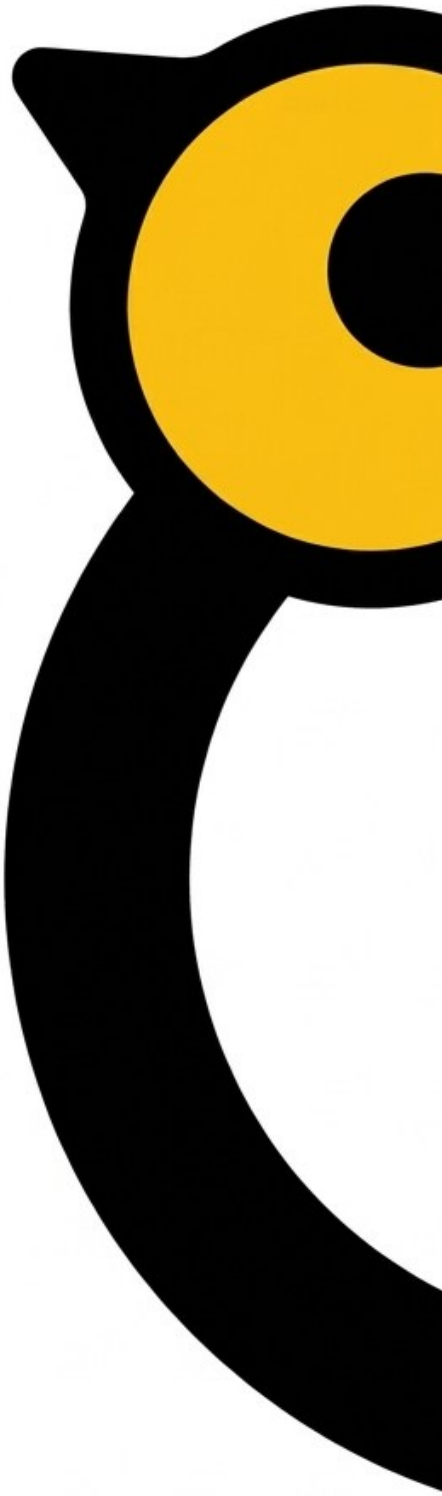

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