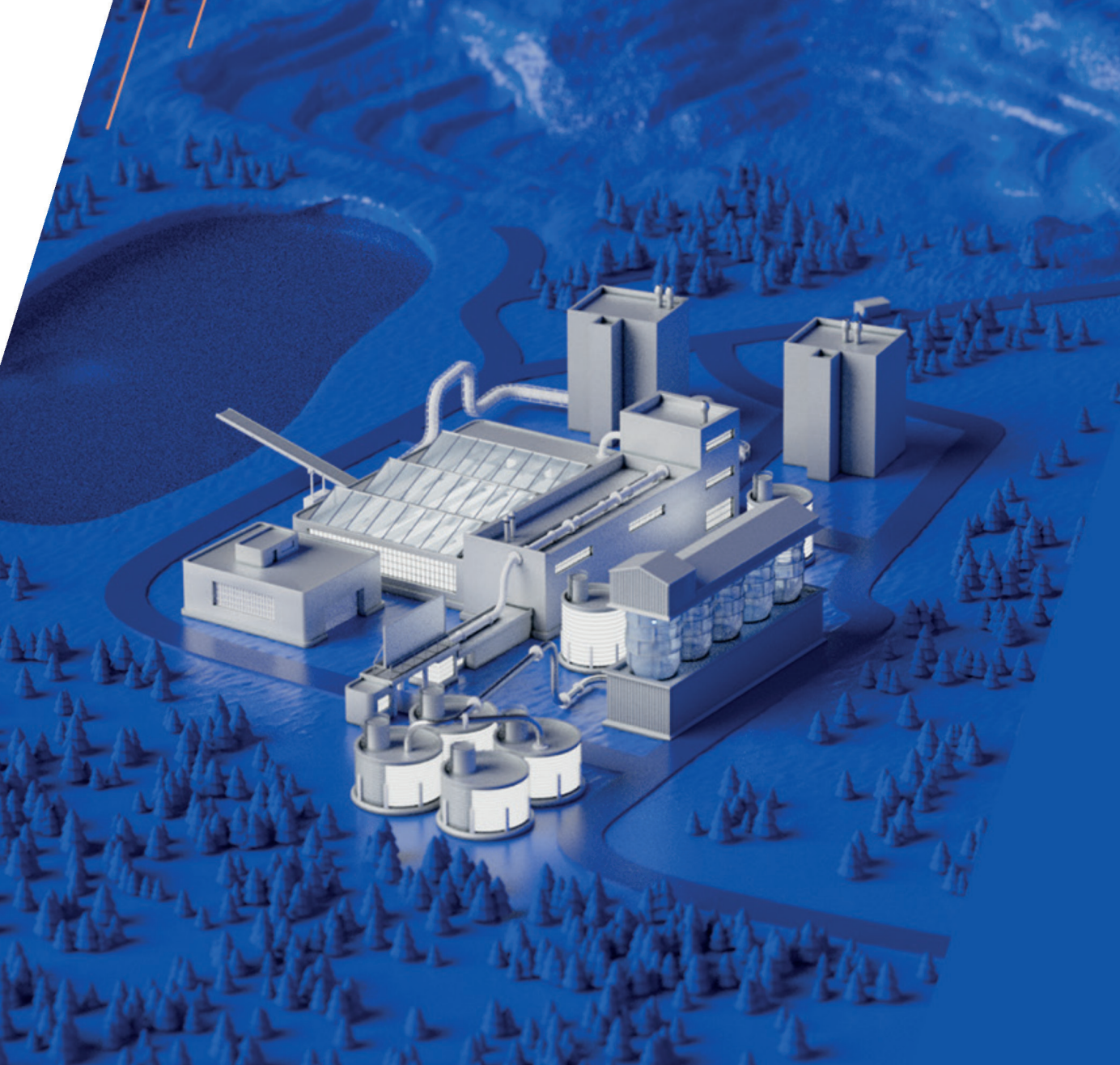

SEDLECKÝ
KAOLIN



Centuries of Quality

Since

1892

COMPANY HISTORY AND EXPERIENCE

Family owned
and operated company

Experience is mining
more than
130 years

Established in
1892

Major supplier
in Europe


MINIMAL CO2 FOOTPRINT
Min dependence on external energy suppliers
(high energy self-sufficiency)
SCAN QR TO FIND OUT MORE

SOCIAL AND ENVIRONMENTAL RESPONSIBILITY

Reclamation of our environment and human resource development is an integral part of our business.

WE HAVE EVERYTHING UNDER ONE ROOF

Complex supplier

Own deposits

Mining

Processing

Transport

WE HAVE A STRONG FOUNDATION

100% Czech capital, one owner

8 manufacturing plants

More than 20 kaolin and bentonite deposits

550 employees

High market share in kaolin and bentonite

ISO certification 9001:2015 and 14001:2015, BRC certification

WE HAVE PERFECT LOCATION TO SERVE ALL YOUR NEEDS

We are located in the heart of Europe, Karlovy Vary, Czech Republic

WE ARE SPECIALISTS IN PRODUCTION OF

Kaolin clay

Kaolin mixtures

Zeolite

Calcined clays

Bentonite

SEDLECKÝ KAOLIN
CENTURIES OF QUALITY

USE OF KAOLIN

USE OF KAOLIN

- Tableware
- Glazes,
- Sanitary ceramics
- Technical ceramics
- Electroporcelain
- Casting bodies
- Refractories
- Paper industry
- Chemical industry (f.e. rubber)
- Paints

CERAMIC KAOLINS

- Fine grained ceramic kaolin with higher content of kaolinite
- Increased plasticity
- Good raw strength
- Good casting properties
- Suitable also for high-temperature application

FINEGROUND KAOLINS

- Powder kaolin with high alumina content for many technical applications incl. refractories
- Coarse-grained filler for chemical industry,
- Filler with increased brightness for chemical industry
- White filler for refractories and chemical industry

KAOLINS FOR USE IN PAPERS AND PAINTS

- Paper kaolin
- High brightness
- lower fraction under 2 µm
- low abrasivity
- Filler with suitable mineralogical and chemical composition

FINAL PRODUCTS

- Porcelain
- Sanitary ware
- Ceramic tiles
- Technical ceramics
- Chemical industry
- Paints
- Paper production
- Glazes
- Building materials (stucco/plaster, concrete mixtures)
- Tree sprays against pest
- Cosmetics
- Pencil / Lead
- Chalk
- Medicine

USE OF BENTONITE, CALCINED KAOLINS AND METAKAOLINS

USE OF BENTONITE

- Foundry industry
- Building industry
- Agriculture
- Food Industry
- Drilling
- Catalysts
- Cosmetics
- Sorbents

FINAL PRODUCTS

- Construction sealing
- Building industry
- Drilling mixtures for tunneling
- Moulding mixtures for foundry casting
- Cat litter for cats
- Cosmetics
- Feeding mixtures in agriculture
- Industrial sorbents - waste disposal

CALCINED KAOLINS AND METAKAOLINS

- Refractories
- Lightweight refractories
- Chamotte
- Glazes
- Chemical and construction industry
- Rubber
- Plastics

FINAL PRODUCTS

- Glazes
- Firing Tools
- Ceramic rollers
- Refractory materials - bricks
- Filtration ceramics
- Electroisolation
- Chamottes
- Concrete mixtures
- Polymers

HOW WE OPERATE

Sedlecky Kaolin operates with state of the art equipment and sophisticated computer controlled processes

KAOLIN REVIEW

TECHNICAL INFORMATION

CERAMIC KAOLINS
WITH INCREASED PLASTICITY

NEW

Custom kaolin
Thanks to a large resource base and an innovated process, we are now able to customize products according to customers requirements and needs.

Zettlitz Ia
Standard finegrained ceramic kaolin with higher content of kaolinite, increased plasticity, good raw strength, good casting properties, suitable also for high-temperature application. Chemical and mineralogical composition is standard (content of kaolinite >90%, Fe_2O_3 ca. 0,9%, TiO_2 ca. 0,2%).

Ceraluh
Kaolin with good plasticity with high content of fine flux (potash feldspar, K_2O = 1,5% or fine muscovite), increased casting rate, good granulometry and zero content of TiO_2 and high content of Al_2O_3. Application of this kaolin enables to manage advantageous mullite content with low cristobalite content <1%.

NEW

Premier
Kaolin with good plasticity with adjusted granulometry to improve casting properities.

Imperial
Kaolin with good and casting properities for sanitary and technical ceramic.

T79
Kaolin with increased plasticity, suitable for technical ceramics and electroporcelain.

NEW

MK II Cast
Special kaolin for casting bodies.

OT76
Kaolinitic filler for high-temperature application.

TRADE MARK		NEW 1	2	3	NEW 4	5	6	NEW 7	8
		Custom made	Zettlitz la	Ceraluh	Premier	Imperial	T79	MK II Cast	OT76
RECOMMENDED APPLICATION			Universal use tableware glazes	Sanit. Ceramics	Sanit. Ceramics	Sanit. / techn. Ceramics	Technical ceramics	Casting bodies	Refractories
TECHNICAL PROPERTIES									
MINERALOGY	kaolinite	up to 98%	92%	78%	85%	88%	86%	82%	88%
	main accessory	mica, feldspar, quartz	mica	mica, feldspar	mica	mica	mica	mica	mica
GRANULOMETRY	% < 2 µm	11 - 85	62	50	52	60	60	40	63
	% > 63 µm	0,02	0,02	0,02	0,50	0,02	0,03	0,3	0,01
DRY MOD. OF RUPTURE	MPa	up to 5	3,3	2,5	2,0	2,5	2,5	-	2,1
CONCENTRATION VISCOSITY	% of solids	up to 65	57	57	60	57	52	60	-
CASTING RATE	mm/√min	up to 2,00	0,60	1,00	1,00	0,65	-	1,20	-
MBA	meq/100 g	up to 25	25	20	20	22	22	12	22
PLASTICITY PFFEFERKORN	% water	up to 45	42	40	-	42	45	-	45
CHEMICAL ANALYSIS [%]									
Al_2O_3		up to 38,5	37	37	36	37	37	36	37
SiO_2		down to 45	47	47	48	47	47	49	47
Fe_2O_3		down to 0,5	0,9	0,9	1,0	1,0	1,2	0,7	1,2
TiO_2		down to 0,1	0,2	0,1	0,5	0,3	0,2	0,2	0,6
CaO		-	0,2	0,2	0,2	0,2	0,2	0,2	0,2
MgO		down to 0,1	0,2	0,2	0,2	0,2	0,3	0,2	0,2
K_2O		down to 0,4	0,9	1,5	0,8	1,0	1,2	1,2	0,9
Na_2O		down to 0,03	0,05	0,05	0,02	0,06	0,03	0,05	0,03
L.o.I		-	13	13	13	13	13	12	13

SPECIAL PRODUCTS

CALCINED KAOLINS

Kerian HEAT
Refractory kaolin chamotte, high mullite content, zero cristobalite content, water adsorption till 3%, various grain fractions incl. the finest fraction 0-75 µm.

Kerian GLAZE
White kaolinitic filler with high alumina content, cristoballite under ca. 12%, various fractions incl. 0-75 µm.

Kerian ISOL
Dense less hard kaolin chamotte, water adsorption 14-18 %.

KTM
White, porous light-weight kaolin chamotte, resistant to CO-corrosion at high temperature, fulfills the Class A of the corrosion test.
Bulk density in the fraction 1-4 mm = 650-750 kg/m^3, mullite content > 62%.

Boltin WHITE
Very reactive metakaolin - finegrained puzzolan and high brightness (R457 over 80%).

Boltin RAPID
Very reactive metakaolin - finegrained puzzolan, brightness approx. 76%.

TRADE MARK	1	2	3	4	5	6
	Kerian HEAT	Kerian GLAZE	Kerian ISOL	KTM	Boltin WHITE	Boltin RAPID
RECOMMENDED APPLICATION	refractories	glazes	refractories	lightweight refractories	chemical and construction industry	

TECHNICAL PROPERTIES

PRODUCT	calcined kaolin, high mullite content	calcined kaolin for glazes	medium hardness kaolin-chamotte	lightweight kaolin-chamotte	reactive filler	reactive filler
MAIN BENEFITS	high mullite content, minimum cristoballite	higher firing brightness - perfect gloss and reflectivity	- high refractoriness	- corrosion resistance to carbon monoxide exposition	very high brightness	reactivity
SUPPLIED FRACTIONS (MM)	3-6 / 1,5-3,0 / 0,5-1,5 mm / fineground < 0,075 mm	0-2 mm / fineground < 0,075 mm	0-4 mm	4-8 / 1-4 / 0-1 mm	fineground product: d50 4,5 µm; d90 12 µm	
MINERALOGY	55% mullite, 0% cristoballite	62% mullite, 10% cristoballite	30% mullite, 1% cristoballite	64% mullite, 15% cristoballite	metakaolinite	
PHYSICAL PROPERTIES	absorption 2,4%; porosity 7%	absorption 10%, porosity 15%	absorption 16%	corrosion test in CO: Class A	puzzolanic activity 1200 mg Ca(OH)2/g	
BULK DENSITY	2300 kg/m3	2100 kg/m3		700±50 kg/m^3, 1000 kg/m^3 (fraction 0-1 mm)	480 kg/m^3	450 kg/m^3
OTHER PARAMETERS	applied firing: 1520-1530°C in tunnel kiln	applied firing: 1350-1400°C in tunnel kiln	refractoriness min. 33/34		brightness 83 %, oil value 63, moisture 0,1 %	brightness 76 %, oil value 66, moisture 0,1 %

CHEMICAL ANALYSIS [%]

Al_2O_3	42	42	42	43	41	42
SiO_2	54,5	55	55	54	54	54
Fe_2O_3	1,0	0,9	1,0	1,3	1,0	1,2
TiO_2	0,4	0,2	0,3	0,4	0,2	0,2
CaO	0,2	0,3	0,4	0,2	0,4	0,4
MgO	0,2	0,4	0,4	0,3	0,3	0,2
K_2O	1,6	1,0	1,4	1,3	1,0	1,2
Na_2O	0,02 < 0,1	0,1	0,03	0,03	0,1	0,1
L.o.I	0,2	0,2	0,3	0,3	0,5	1,4

FINEGROUND KAOLINS

Zettlitz Ia
Universal powder kaolin with high alumina content for many technical applications incl. refractories.

MKM
Coarse-grained filler for chemical industry.

OTM
Filler with increased brightness for chemical industry.

OT76M
White filler for refractories and chemical industry.

All of our standard granular kaolins can be milled to a powder product with appr. 1% moisture.

TRADE MARK		1	2	3	4
		Zettlitz la	MKM	OTM	OT76M
RECOMMENDED APPLICATION		techn. ceramics / refractories / chem. industry	rubber / glass fibers	paints / chemistry	rubber / plastics
TECHNICAL PROPERTIES					
MINERALOGY	kaolinit	92%	82%	88%	88%
	main accessory	mica	mica, quartz	mica	mica
GRANULOMETRY	% < 2 µm	63	32	60	60
	% > 63 µm	0,05	1,1	0,05	0,05
CHEMICAL ANALYSIS [%]					
Al_2O_3		37	34	37	37
SiO_2		47	51	46	47
Fe_2O_3		0,9	1,1	1,3	1,1
TiO_2		0,2	0,3	0,7	0,6
CaO		0,3	0,2	0,2	0,2
MgO		0,2	0,2	0,2	0,2
K_2O		0,9	1,5	0,8	0,9
Na_2O		0,03	0,06	0,02	0,03
L.o.I		13	11	13	13

KAOLINS
FOR USE IN PAPERS AND PAINTS

OT84 PAINT
Paper kaolin, high brightness, lower fraction under 2 µm, low abrasivity.

OT82
Fine filler kaolin, brightness min. 81% (R457), very low abrasivity (Einlehner 5 mg).

OT80
Universal paper kaolin, used also as refractory Ti-kaolin.

OT76
Filler, suitable mineralogical and chemical composition.

TRADE MARK		1	2	3	4
		OT84 PAINT	OT82	OT80	OT76
RECOMMENDED APPLICATION		white paper / paints	filler / white paper	filler / white paper	fillers
TECHNICAL PROPERTIES					
BRIGHTNESS % (FILTER R 457)		82,5%	81,5%	79,0%	77,0%
ABRASION IN MG (ABRASIONSTESTER EINLEHNER)		10	6	8	8
GRANULOMETRY	% < 2 µm	55	64	63	63
	% > 63 µm	0,01	0,01	0,01	0,01
PH	15% suspension	8	8,5	8,5	8,5
% P_2O_5		0,15	0,15	0,15	0,15
CHEMICAL ANALYSIS [%]					
Al_2O_3		37	37	37	37
SiO_2		47	46	46	47
Fe_2O_3		0,8	1,3	1,2	1,1
TiO_2		0,5	0,7	0,7	0,6
CaO		0,3	0,2	0,2	0,2
MgO		0,2	0,2	0,2	0,2
K_2O		1,0	0,8	0,8	0,8
Na_2O		0,01	0,02	0,02	0,02
L.o.I		13	13	13	13

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For more information on kaolins and test methods
contact us at sales@sedlecky-kaolin.cz
or visit www.sedlecky-kaolin.cz

KAOLIN FORM

- kaolin in lumps - noodles, 10x10-40 mm, moisture <12%
- broken lumps, 2-10 cm, moisture <18%, bulk weight 950-1050 kg/m^3
- dried and fineground powder, moisture <2%, bulk weight 350-450 kg/m^3

DELIVERED PACKAGING

- valved paper sacks, kaolin in lumps, 25-45 kg
- repulpable paper sacks, 20-25 kg, loaded on pallets, fixed in PE shrink foil
- IBC (big bags), 500-1200 kg, one way, with bottom outlet

TESTING METHODS

- dry modulus of rupture: extruded test samples 8x60mm, slipcast bodies
- rheology: rotational viscometer, torsion viscometer
- capillary viscometer, Czech standard, Lehmann
- usual deflocculation: 0,10 - 0,15% Na_2CO_3
- casting concentration: % solids in deflocculated slip, viscosity 500 mPas
- casting rate (mm/√min) - deflocculated slip, 55% solids, 10-30 min. in plaster mould
- mineralogy: chemical analysis + X-ray difractography + microscopy

The data quoted are based on our test methods and experience. Since the products are refined raw materials that are subject to natural fluctuations, the presented data may vary.
Exact specifications are consulted and agreed with the customer.