SIBELCO

Ukrainian Clays

The next step in Tile Evolution



Ukrainian Clays.

Essential properties for tile manufacturers.

Ukrainian Clays are a unique mineralogy, providing about 20% of fine illitic minerals. As a result, the clay is extremely plastic and strong.

Complete separation from organic components during depositing. Less than 0.10% carbon content, an essential property for fast firing technology.

High natural alkali content (Na+K= about 3%) providing fast fusion of the body during firing, and low water absorption of the final product.

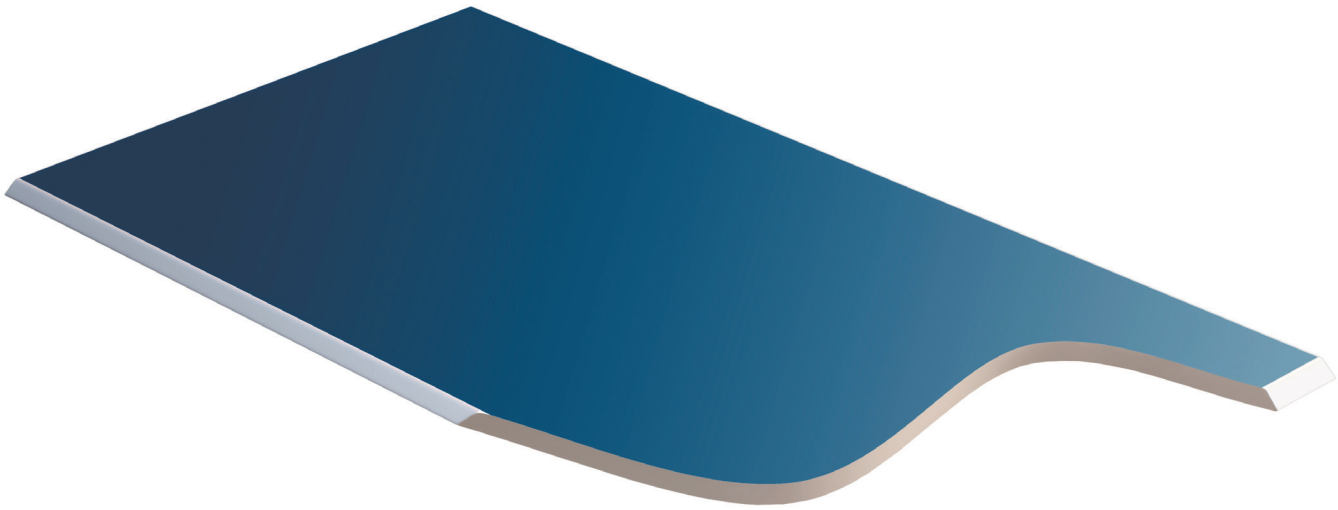
Low content of coloring oxides providing white firing color and flexibility in decorating.

All this makes Ukrainian clay an ideal mineral for the production of porcelain tile using fast firing technology (the tile industry consumes about 85% of all Ukrainian plastic clays).

Other applications include facing bricks, refractory, sanitaryware, insulators, tableware, glazes and engobes.

Due to the mineralogical composition of Sibelco Ukrainian clay, with its high quantity of mixed Layer mineral, low free Quartz with very fine particle size distribution Premiere gives advantages to the production of vitrified tile bodies;

- Highly Plastic
- Stable Shrinkage Along Firing
- Good Vitrification
- Light Firing Color



DBY & DBK Clays

Composite clays in the DBY range are the plastic raw material particularly suited for the production of different kind of ceramic goods and also of the high-quality porcelain stoneware (gres porcellanato), floor and wall tiles etc.

The clays have high dry bending strength, and white fired color and are ideal for fast firing.

Composite clays in the DBK type are the plastic raw material for producing the wide range goods such as – acid-proof bricks, ceramic pipes, roof, floor and wall tiles, etc.

The unusual combination of exceptional dry bending strength under a low temperature are due to the unique dual morphology of the illite – it is a component mineral of the given clay type.

DBY-3

DBY-4

DBK-0

DBK-1

DBK-2

Technical Data

Porcelain Tiles	DBY-3	DBY-4	DBK-0	DBK-1	DBK-2
SiO_2	58	60	60	62	66
TiO_2	1.4	1.4	1.4	1.4	1.5
Al_2O_3	27	26	25	24	21.0
Fe_2O_3	0.95	1.0	1.1	1.2	1.3
CaO	0.3	0.3	0.3	0.3	0.3
MgO	0.5	0.5	0.5	0.5	0.5
K_2O	2.3	2.3	2.4	2.4	2.2
LoI	7.7	7.3	7.0	6.7	6.5
L	78±1.0	77±1.0	76±1.0	74±1.0	71±1.0
a*	2	2,3	2,5	2,6	3,6
b*	13,2	13,8	14,5	14,8	17,5
Dry bending strength, MPa	11.5±1.0	11.5±	11.0±0.5	10.5±0.5	90 ±5
Sieve residue (%) >125µm	4	4.5	4.8	4.8	≤5.0

Opal DBX Clays

Clays of DBX grade have a high plasticity and cohesive property, they are strong in dry condition and distinguished by high whiteness after firing. The raw material is the most suitable for production of high quality porcelain-faience bodies and glaze as well as electro-porcelain and technical ceramic.

The clays can be used as some corrective additives to enhance the strength and plasticity of wide range of ceramic body formulation and are ideal for fast firing.

Composite clays in the DBY range are the plastic raw material particularly suited for the production of different kind of ceramic goods and also of the high-quality porcelain stoneware (gres porcellanato), floor and wall tiles etc.

The clays have high plasticity, dry bending strength, and white fired color and are ideal for fast firing.

DBX-2

Technical Data

Engobes/Glazes	DBX-2
SiO_2	55
TiO_2	1.4
Al_2O_3	30
Fe_2O_3	0.85
CaO	0.3
MgO	0.5
K_2O	2.3
LoI	8.5
Colour after firing 1200°C, average	
L	83±1.0
a*	1.5
b*	12.4
Sieve residue (%) >125µm	2

DBK Clays

Composite clays in the DBK type are the plastic raw material for producing the wide range goods such as – acid-proof bricks, ceramic pipes, roof, floor and wall tiles, etc.

The unusual combination of exceptional dry bending strength under a low temperature are due to the unique dual morphology of the illite – it is a component mineral of the given clay type.

DBK-2E

Technical Data

Bricks	DBK-2E
SiO_2	55
TiO_2	1.4
Al_2O_3	22
Fe_2O_3	0.9
CaO	0.3
MgO	0.5
K_2O	2.5
LoI	6.0
Colour after firing 1200°C, average	
L	77±1.0
a*	3
b*	14.5
Sieve residue (%) >125µm	5

We became the first Ukrainian raw materials supplier to achieve the globally recognized standards ISO 9001, ISO 14001 and OHSAS 18001.

Our quality management system corresponds to the requirements of the globally recognized ISO 9001-2000 standard.

Our quarry and production site is located in Eastern Ukraine and boasts the country`s first purpose-built covered storage area for clay, handling with a capacity of 100 000 tons. The direct rail link into this storage unit enables fast and direct supply to our growing network of customers. Sibelco's production areas have good rail connection to the Black Sea ports for distribution to the Mediterranean countries, Middle East and India; also by railway to Eastern Europe.

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V3 - Sept 2022

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