



Kaolin Datasheet

Egypt Mineral Ores [E.M.O.]

Mineral processing, Egypt.

Description



Color dark white, sometimes red, blue or brown tints from impurities.

Kaolinite is a clay mineral, part of the group of industrial minerals, with the chemical composition $Al_2Si_2O_5(OH)_4$

It is a layered silicate mineral, with one tetrahedral sheet of silica (SiO_4) linked through oxygen atoms to one octahedral sheet of alumina (AlO_6)

Kaolinite has a low shrink-swell capacity and a low cation-exchange capacity (1-15 meq/100g). it is a soft earthy, usually white grades, mineral (decahedral phyllosilicate clay), produced by the chemical weathering of aluminum silicate minerals like feldspar.

Commercial grades of kaolin are supplied and transported as a dry powder.

Element	Type 1	Type 2	Type 3
	Result (%)	Result (%)	Result(%)
SiO ₂	45 – 50	47 – 50	55 – 62
Al ₂ O ₃	32 – 38	30 – 35	30 – 34
Fe ₂ O ₃	0.20 – 0.70	1 – 1.5	0.90 – 1.20
CaO	0 – 0.50	0 – 0.50	0.30 – 0.60
MgO	0 – 0.30	0.50 – 1	0.20 – 0.40
Na ₂ O	0 – 0.05	0 – 0.30	0.10 – 0.20
K ₂ O	0 – 0.10	0 – 0.10	0.02 – 0.07
L.O.I	11 – 13	11 – 13.30	9 – 11
TiO ₂	1 – 2	1 – 2	1.4 – 2
CL	0 – 0.50	0 – 0.10	≤ 0.05

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