**KAOLIN**

The primary constituent in kaolin is the mineral kaolinite, a hydrous aluminum silicate formed by the decomposition of minerals such as feldspar. The name kaolin derives from the Chinese and means high ridge. High ridge is a reference to the hill in south-eastern China where the clay was originally discovered and used. The white color of the mineral can either be naturally occurring, or can result after processing which removes minerals and other color-bearing compounds. The small particle size of the mineral contributes to its white color by scattering light.

**Kaolin in Egypt**

1. **Sinai Peninsula) Abu Zenima(**

Kaolin layers are found in Abu Zenima area as alternative layers with thick layers of sandstone. Reserve estimated in Abu Zenima area is about 16.5 million tons. New deposits of kaolin has been discovered in the early eighties at El – teeh plateau, about 25 km to the east of Abu Zenima city. The reserve, which has been explored in this area is about 88 million tons. Kaolin in Abu Zenima area uneven aluminum oxide ratio from region to region between 20 to 36%.

1. **Aswan (Kalabsha )**

Reserves was discovered about 16.5 million tons of kaolin in the Kalabsha area southwest of Aswan city, it has been exploited in the regular refractories industry. Ranging alumina by 29% to 35%.

1. **Abo Eldarag area (south of Suez).**

Kaolin in lower quality of the Sinai Peninsula. Ranging alumina by 22% to28%.

* **Applications**

1. Paper Industry.
2. Porcelain and Tableware Industry.
3. Paint Industry.
4. Rubber Industry.
5. Cable insulation.
6. Fertilizers Industry.
7. Medicinally as an adsorbent**.**

* **Specifications**
* **Chemical composition**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Elements | SiO2 | AL2O3 | Fe2O3 | CaO | SO3 | MgO | Na2O | K2O | TiO2 | L.O.I |
| MIN.% | 54.00 | 30.00 | 0.50 | 0.30 | 0.04 | 1.20 | 0.25 | 0.10 | 0.15 | 10.00 |
| MAX. % | 56.00 | 34.00 | 1.80 | 0.70 | 1.00 | 1.90 | 0.35 | 0.18 | 0.20 | 14.00 |

* **Physical Properties**

|  |  |
| --- | --- |
| Property | value |
| Solubility | Insoluble. |
| Density | 1.8 to 2.6 |
| Ph | 4.5 to 6.5 |
| Molecular Weight | 258.156 g/mol |

**EGYPT STONE CO. PROVIDING ALL TYPES OF KAOLIN WITH HIGH QUALITY.**