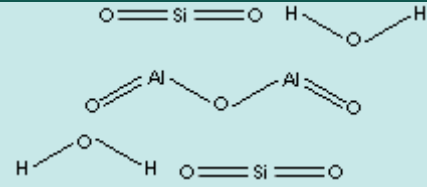


# KAOLIN

## PRODUCT IDENTIFICATION

CAS NO.	1335-30-4 (Aluminium Silicate) 1332-58-7 (Kaolin)
EINECS NO.	215-628-2 (Aluminium Silicate)
FORMULA	$\text{Al}_2\text{O}_3 \cdot 2\text{SiO}_2 \cdot 2\text{H}_2\text{O}$
MOL WT.	
H.S. CODE	
TOXICITY	
SYNONYMS	Aluminum Silicate; Silicic acid, aluminum salt;



Aluminosilicic acid; Kieselsäure, Aluminiumsalz (German); ácido sílicico, sal de aluminio (Spanish); Acide silicique, sel d'aluminium (French); China clay; Kaolinite; Kaopectate; Porcelain clay;

## DERIVATION

## CLASSIFICATION

## GENERAL DESCRIPTION & APPLICATIONS

kaolin is any of a group of fine clay minerals with the chemical composition of  $\text{Al}_2\text{O}_3 \cdot 2\text{SiO}_2 \cdot 2\text{H}_2\text{O}$  which means two-layer crystal (silicon-oxygen tetrahedral layer joined to alumina octahedral layer) exist alternately. Clay minerals include kaolinite, nacrite, dickite, montmorillonite, illite, chlorite, attapulgite and anauxite. Chemical compositions of kaolin minerals are same. But each differs from by layers stacked on top of one another. Kaolinite is the principal constituent of kaolin. Its chemical structure is  $\text{Al}_2\text{Si}_2\text{O}_5(\text{OH})_4$  (theoretically 39.8% alumina + 46.3% silica + 13.9%) but elements are not diverted from this ideal composition. Kaolinite is a hydrous aluminum silicate prepared by the chemical weathering of feldspar and decomposition of aluminium silicate rocks. It is a soft, earthy and white mineral but is colored light orange to red by iron oxide. kaolin minerals long have been the basic raw materials used in the ceramic industry, especially in fine porcelains. They can be easily molded, have a fine texture, and are white though fired. Large quantities of them are used also in paper coating, filler, paint, plastics, fiberglass, catalysts, and other specialty applications. They are the main component of blue pigment called ultramarine Blue (sodium aluminosilicate containing sulphur) which is prepared by heating kaolin, sodium carbonate, sulfur and other inexpensive ingredients together. It features heat and alkali resistance. They are used to treat upset stomach medically and as an ingredient pesticide useful to replace organic pesticides.

## SALES SPECIFICATION

### KAOLIN ORE

GRAIN SIZE	59.0 - 61.0%
SPECIFIC GRAVITY	50mm max
KAOLINITE	95.0% min
HARDNESS	3 -4
LOSS ON IGNITION	14.5% max
SPECIFIC GRAVITY	2.6
pH	6 - 8
$\text{Al}_2\text{O}_3$	39.0% min
$\text{SiO}_2$	43.5% min
$\text{Fe}_2\text{O}_3$	0.7% max
$\text{TiO}_2$	0.6% max
MnO	0.3% max
$\text{P}_2\text{O}_5$	0.3% max
$\text{Na}_2\text{O}$	0.2% max
CaO	0.3% max

MgO	0.3% max
K <sub>2</sub> O	0.2% max
SO <sub>3</sub>	0.03% max
TRANSPORTATION	
PACKING	
HAZARD CLASS	
UN NO.	
OTHER INFORMATION	