



TECHNICAL DATA SHEET

Product Name: Aluminum Phosphate

Chemical Formula: AlPO_4

CAS No.: 7784-30-7

Molecular Weight: 121.95 g/mol

Description

Aluminum Phosphate is a high-purity inorganic phosphate compound supplied as a white to off-white powder. It is odorless, chemically stable, and insoluble in water. The product exhibits good thermal stability and is widely used in catalysts, refractory materials, ceramics, and various industrial chemical formulations.

Physical Properties

The product appears as a fine white to off-white powder with no noticeable odor. It is insoluble in water and common organic solvents. The pH value of a 10% aqueous suspension is typically in the range of **5.0 to 7.0**. Bulk density generally falls between **0.6 and 0.9 g/cm³**, depending on packing and particle structure.

Chemical Characteristics

Component / Impurity	Specification
Al_2O_3	$\geq 40.0\%$
P_2O_5	$\geq 45.0\%$
Fe_2O_3	$\leq 0.05\%$
CaO	$\leq 0.10\%$
SO_4^{2-}	$\leq 0.30\%$
Heavy Metals (as Pb)	≤ 20 ppm

Thermal Properties

Loss on drying is normally $\leq 2.0\%$, indicating low moisture content. Ignition loss at approximately 1000 °C is typically $\leq 5.0\%$, reflecting good thermal stability under high-temperature conditions.

Applications

Aluminum Phosphate is commonly used as a catalyst or catalyst support, in refractory and ceramic materials, as a chemical intermediate, and in specialty inorganic formulations where thermal and chemical stability are required.

Storage and Handling

The product should be stored in a cool, dry, and well-ventilated area. Containers must be kept tightly closed and protected from moisture. Under proper storage conditions, the product remains stable for long-term use.