



TECHNICAL DATA SHEET

1. Product Name

Sodium Aluminum Phosphate (SALP)

Forms: Anhydrous or Tetrahydrate ($\cdot 4\text{H}_2\text{O}$)

2. Product Description

Sodium Aluminum Phosphate (SALP) is a white to off-white powder, used as a leavening agent, pH regulator, and functional ingredient in food and pharmaceutical applications.

It is highly soluble in water, stable, and neutral in taste, providing controlled reactivity in baking and industrial processes.

3. Chemical & Physical Properties

Property	Specification
Chemical Formula	$\text{Na}_x\text{Al}_y(\text{PO}_4)^z\cdot\text{nH}_2\text{O}$ (Anhydrous or Tetrahydrate)
Appearance	White to off-white powder
Solubility	Soluble in water; insoluble in organic solvents
pH (10% aqueous solution)	3.0–5.5 (acidic) / 7.0–8.5 (basic)
Bulk Density	0.7–0.9 g/cm ³
Particle Size	100% passes 100 mesh
Moisture	$\leq 5\%$ (Anhydrous $\leq 2\%$)
Loss on Ignition (LOI)	$\leq 12\%$

4. Specifications

Parameter	Typical Value
Al ₂ O ₃ Content	15–21%
Na ₂ O Content	8–10%
Heavy Metals (Pb)	≤ 10 ppm
Arsenic (As)	≤ 3 ppm
Food Grade Compliance	Meets GRAS / EU E541 / GB Standards

Custom specifications available based on application requirements.

5. Applications

- Baking Industry: Leavening acid for cakes, biscuits, crackers.
- Dairy Products: Stabilizer and emulsifier in processed cheese.
- Pharmaceuticals: pH regulator in antacids and buffer solutions.
- Food Processing: pH control in sauces, beverages, and canned foods.

6. Advantages

- High purity and food-grade quality
- Neutral flavor, no impact on taste
- Controlled reactivity for consistent performance
- Stable under storage and handling
- Complies with international food safety standards

7. Packaging & Storage

- Packaging: 25 kg Kraft paper bags with PE liner, 500–1000 kg jumbo bags
- Storage: Cool, dry, ventilated place. Avoid moisture, sunlight, and contamination.
- Shelf Life: 2 years from production date

8. Regulatory Status

- USA: GRAS (Generally Recognized as Safe)
- Codex Alimentarius: Approved for baked goods
- EU: E541 (acidic) / E541a (basic)
- China GB Standard: Food production approved
- ISO & HACCP: Compliant

