



ARC PHOSPHATES

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TECHNICAL DATA SHEET (TDS)

Product Name: Sodium Acid Pyrophosphate (SAPP) | **CAS No.:** 7758-16-9 | **EINECS No.:** 231-835-0

Product Overview: Sodium Acid Pyrophosphate (Disodium Dihydrogen Pyrophosphate) is a white, water-soluble inorganic acid salt. It functions as an excellent leavening acid, pH buffering agent, chelating sequestrant, dispersant, and surface treatment agent across industrial, leather, cleaning, and food processing applications.

1. COMPREHENSIVE TECHNICAL SPECIFICATIONS

Technical Parameter	SAPP Technical Grade	SAPP Food / Pure Grade
Chemical Formula	$\text{Na}_2\text{H}_2\text{P}_2\text{O}_7$	$\text{Na}_2\text{H}_2\text{P}_2\text{O}_7$
Molecular Weight	221.94 g/mol	221.94 g/mol
Main Content / Assay (as $\text{Na}_2\text{H}_2\text{P}_2\text{O}_7$)	95.0% Min.	95.0% Min.
Phosphorus Pentoxide (P_2O_5 Content)	63.0% – 64.5%	63.5% – 64.5%
pH (1% Solution @ 25°C)	3.8 – 5.0	3.8 – 4.5
Appearance	White Free-Flowing Powder	White Fine Crystalline Powder
Water Insoluble Matter	0.50% Max.	0.60% Max.
Iron (Fe) Content	0.01% Max. (100 ppm)	0.005% Max. (50 ppm)
Heavy Metals (as Pb)	10 ppm Max.	10 ppm Max.
Arsenic (As)	3 ppm Max.	3 ppm Max.
Loss on Ignition (L.O.I. @ 800°C)	4.0% – 5.5%	4.0% – 5.0%
Packaging Specification	>25 kg Double Lined PP in HDPE Bag (25 kg / 50 kg HDPE woven bag with double PE inner lining)	

2. KEY INDUSTRIAL APPLICATIONS

- Bakery & Food Processing:** Serves as a controlled, slow-acting leavening acid in baking powders, cake mixes, and refrigerated doughs for uniform carbon dioxide gas release.
- Industrial Cleaning & Water Treatment:** Acts as an effective buffering agent, scale control additive, and sequestrant for calcium and iron ions in industrial washing systems.
- Leather Processing & Tanning:** Used to remove iron stains during hide processing and as a stabilizing agent during Chrome tanning procedures.
- Petroleum & Oil Drilling Fluid:** Functions as a dispersant and clay mud thinner in oilfield drilling fluid formulations.
- Potato & Produce Processing:** Prevents enzymatic browning and dark discoloration (after-cook darkening) in processed potato products.
- Poultry & Seafood Industry:** Acts as a moisture retention aid, emulsifier, and color-holding agent in processed poultry and seafood.