

Sodium Hexametaphosphate (SHMP)

P₂O₅ ≥ 68% Grade

Origin: China

Industrial Grade Chemical Product Specification Sheet

1. PRODUCT IDENTIFICATION & SPECIFICATIONS

Product Name	Sodium Hexametaphosphate (SHMP)
Trade Name / Brand	BYPHOS®
Chemical Formula	(NaPO ₃) ₆ / Na ₆ P ₆ O ₁₈
CAS Registry Number	10124-56-8 / 68915-31-1
Total Phosphate Content	Total Phosphate (as P ₂ O ₅) ≥ 68.0%
Inactive Phosphate (as P ₂ O ₅)	≤ 7.5%
Iron (Fe) Content	≤ 0.05%
Water Insoluble Matter	≤ 0.06%
pH Value (1% Solution)	5.8 – 7.0 (Neutral to slightly acidic)
Physical Appearance	White crystalline powder / granular flakes
Packaging Standard	25.0 kg Net Weight (25.1 kg Gross Weight) Polypropylene Woven Bags with PE liner

2. KEY FUNCTIONAL PROPERTIES



Chelating & Sequestering

Forms soluble, stable complexes with multivalent cations (Ca²⁺, Mg²⁺, Fe³⁺), inhibiting scale precipitation and calcium soap formation.



High Dispersion Efficiency

Imparts high negative surface charges to suspended particles, effectively deflocculating clay, mineral slips, and pigment slurries.



Corrosion & Scale Inhibition

Forms a robust microscopic passivating film on metal surfaces, suppressing cathodic and anodic corrosion pathways in industrial water systems.



Rapid Water Solubility

Dissolves readily in water with strong chain-polyphosphate activity, delivering immediate water-softening and threshold inhibition capabilities.

3. PRIMARY APPLICATIONS



Industrial Water Treatment

- Cooling towers, heat exchangers, and boiler water systems.
- Scale inhibitor and soft water threshold conditioning.
- Prevents calcite and gypsum scale deposits.



Detergents & Industrial Cleaning

- Builder in commercial laundry and CIP detergents.
- Prevents hardness mineral interference with surfactants.
- Enhances soil redeposition resistance.



Ceramics & Mineral Processing

- Deflocculant/dispersing additive for ceramic slurry & glazes.
- Viscosity reducer in clay slip casting.
- Flotation depressant in mineral extraction.



Textile, Paper & Drilling Mud

- Dye-bath stabilizer and water conditioner in textile finishing.
- Pitch control and pigment dispersant in paper processing.
- Fluid-loss control and viscosity modifier in drilling muds.



Storage & Handling Guidelines

Hygroscopic Nature: SHMP readily absorbs ambient moisture and undergoes hydrolysis over time into orthophosphates, reducing active efficacy. Store in original sealed packaging in a cool, dry, well-ventilated warehouse away from direct sunlight and incompatible acidic chemicals.

Manufacturer / Packaging Details:

Producer: Sichuan Bangyuan Technology Co., Ltd.

Address: Anguo New District, Jiannan Street, Mianzhu, Sichuan, China

Country of Origin: Made in China | **Net Weight:** 25.0 KG | **Gross Weight:** 25.1 KG