

PHOSPHOROUS Nanopowder



QUICK FACTS

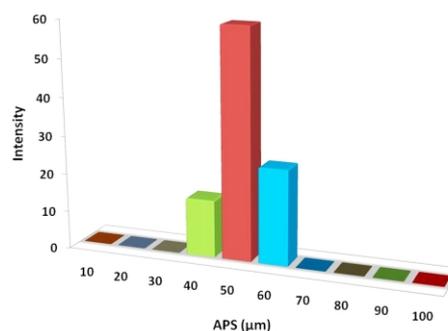
Product	: Phosphorous Nanopowder
Stock No	: NS6130-01-193
CAS	: 7723-14-0
Color	: Red
Form	: Powder

Phosphorus has available in three allotropes, white P, black P, and red P. White P is toxic and chemically unstable. It is not also suitable for the application in LIBs. Among these three different allotropes, red P is the most auspicious candidate for the next-generation high-energy anodic materials owing to its stability and abundance. Red phosphorus exhibits a cubic crystal lattice structure. Red phosphorus can be utilized as a very effective flame retardant, especially in thermoplastics for instance polyamide and

thermosets such as epoxy resins or polyurethanes. However, red P is plagued by its poor electronic conductivity and drastic volume change during the lithiation-delithiation process when served as anodes for rechargeable LIBs. It is considered to be a favorable candidate due to it is a cost-effective and earth-abundant element. RPNP electrodes manifested a high specific capacity, long cycling life, and excellent rate capability as anodes for LIBs. Red phosphorus can be also employed as photocatalyst for hydrogen formation from the water.

APPLICATIONS

- ✓ Drug delivery
- ✓ Tissue coatings
- ✓ Photosensitizers
- ✓ Electronic devices
- ✓ Fireworks
- ✓ Pesticides
- ✓ Fertilizers



Additional Powder Characteristics

Stock No.	Purity	APS
NS6130-01-193	>99%	<100nm

Technical Specification

Molecular Formula	Molecular Weight	Density	Melting Point	Boiling Point
P	30.973 g/mol	2.2-2.34 g/cm ³	416 °C	10 MΩ-cm, 20°C

Properties

- ✓ Chemical Symbol: P
- ✓ CAS No.: 7723-14-0

Chemical Composition

Product	Weight Percent (nominal)	
	P	Other Metal
Phosphorous Nanopowder	>99%	7000ppm

Ordering Information and Stock Availability

- ✓ Product: Phosphorous Nanopowder
- ✓ Distribution: Global
- ✓ Stock Availability: Available
- ✓ Packing Sizes: 25Gms, 50Gms, 100Gms, 500Gms & Bulk Orders

Handling Recommendations

- ✓ Store in the original container in a dry location.
- ✓ Tumble contents prior to use to prevent segregation.
- ✓ Open containers should be stored in a drying oven to prevent moisture pickup.

Safety Recommendations

Download MSDS/SDS NS6130-01-193
 SDS are available from the Nanoshel
 Website at
<https://www.nanoshel.com/product/phosphorus-nanoparticles>

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