

## MOLYBDENUM TRIOXIDE NANOPOWDER

Molybdenum Trioxide is an oxide of molybdenum metal and in this chemical compound, each molecule has one molybdenum atom with three oxygen atoms. In recent years, molybdenum trioxide has the highest production among various molybdenum compounds metal.

Nanopowder of molybdenum has been utilized in different industrial fields in the form of lubricant additives, metallurgical additives, and powder sintering additives. It is also the raw material of electrical components, smoke suppressor and cleaner. Molybdenum trioxide is a chemical compound having formula MoO3. It occurs as the rare mineral molybdite.

Molybdenum oxide unique catalytic and electronic properties and also have the application in chemical synthesis, recording media, petroleum refining, and sensors. It is utilized in optical device applications and the most auspicious material for photoelectrochemical energy production due to high surface area and also having higher photo efficiencies. It is also believed that this compound has the potential to be an anti-bacterial agent and plays a role in waste management.

# Quick*f*cts

Product Molybdenum Trioxide Nanopowder

Stock No NS6130-03-333

CAS 1313-27-5

Color Light White

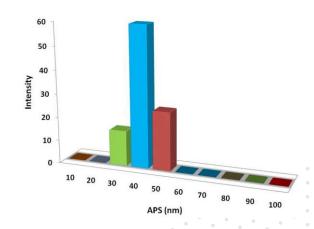
Form Powder

Symbol MOO<sub>3</sub>

Molybdenum 6/Oxygen 16 Group

### **Electronic Configuration:**

Molybdenum [Kr] 4d5 5s1 /Oxygen [He] 2s2 2p4



#### ADDITIONAL POWDER CHARACTERISTICS

Purity	APS
9.9%	<80nm

#### TECHNICAL SPECIFICATION

	Molecular Formula	Molecular Weight	Density	Melting Point
	MoO <sub>3</sub>	143.95 g/mol	4.69 g/cm <sup>3</sup>	795 °C
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#### CHEMICAL COMPOSITION

Product	Weight Percent (nominal)		
	MoO <sub>3</sub>	Other Metal	
Molybdenum Trioxide Nanopowder	99.9%	1000ppm	

#### **APPLICATIONS**

- Utilized in catalysis.
- Employed as catalysts, cracking catalysts, and hydrogenation catalysts.
- Used in the industrial production of acrylonitrile
- Used in glass and ceramics production.
- Serves as an additive to steel and corrosion-resistant alloys
- Electrochemical applications
- Pigment applications
- In coatings, nanowires, nanofibers, plastics, and textiles





