

SPECIFICATION SHEET

MOLYBDENUM DISULFIDE

CAS Number: 1317-33-5

DESCRIPTION

Molybdenum Disulfide is a lead-gray to black powder represented by the chemical formula MoS₂. It is best known for its use as a "solid" lubricant. The coefficient of friction of burnished films of MoS₂ is normally measured to be between 0.03 and 0.06.

It is stable in neutral or reducing atmospheres up to 1400 to 1500°C. In air, the oxidation rate is low at temperatures below 370°C, and very rapid above 560°C.

Molybdenum Disulfide is quite unreactive chemically. It dissolves only in strongly oxidizing acids such as aqua regia or hot concentrated sulfuric and nitric acids. It is not soluble in ordinary aqueous or organic solvent.

The particle density is 4.8 to 5.0 gm/cc and it has a Moh's hardness of 1.

SPECIFICATIONS	Specification (%)
Assay (MoS ₂)	98.60
Acid Insoluble	0.50
Molybdenum Trioxide (MoO ₃)	0.05
Water (H ₂ O)	0.02
Oil	0.0005
Carbon (C)	0.05
Iron (Fe)	0.20
Particle Size (Fisher Number)	3 – 4 microns
Particle Size Microtrac (D50)	3 microns