

SHENYU LUBRICATION TECHNOLOGY CO., LTD

Rm102, Building 19, Zhongde Industrial Park, Yibin Dist. Luoyang, Henan, China
Tel: 86-379 69911868 www.shenyumoly.com Email: daisy@shenyumoly.com

Tungsten Disulfide (WS₂)

Tungsten Disulfide (WS₂) is a solid lubricant. With Coefficient of Friction at 0.03, it offers excellent dry lubricity unmatched to any other substance. It can be used in high temperature and high pressure applications, such as high temperature lubricants, carbon brush. WS₂ powder can also be added to Liquid/Water/Plastic to increase lubricity of mixture, be coated on a substrate by Spraying/Buffering/Tumbling.

Physical and Technical Properties

Properties	Tungsten Disulfide (WS ₂)
CAS Number	12138-09-9
Colour	Silver Gray
Appearance	Crystalline Solid
Melting Point	1250 °C, 1260 °C (decomposes)
Boiling Point	1260 °C
Density	7500 Kg/M ³
Molecular Weight	248
Coefficient of Friction	0.03 Dynamic; 0.07 Static
Load bearing ability	300,000 psi for coated film
Lubrication Temperature Range	Ambient: from -273 °C to 650 °C Vacuum(10-14 Torr): from -188 °C to 1316 °C
Chemical Durability	Inert Substance, Non-Toxic
Magnetism	Non-Magnetic
Rockwell Hardness	30 HRc
Coating Specifications	Spray Blast substrate with Cold and Dry Air at 120 PSI
Coating Film Thickness	0.5 micron
Corrosion Stability	Can slow down the corrosion rate, but can not fully prevent substrate corrosion
Coatable Substrates	Iron, Steel, Aluminum, Copper, other Metals, Plastics and Manmade Solids
Compatibility	Oil, Solvent, Paint, Fuel, Water, Resin/Plastic,

Technical Data Sheet

Compositions	Specifications
W	73.77% - 74.27%
WS ₂	>99.0%
H ₂ O	< 0.20%
Fe	<0.003%
Cd	<0.002%
Cu	<0.003%
Mg	<0.002%
Pb	<0.002%

Grades and Particle Size

Grade	Laser Particle Specifications D50	Particle size by Fisher Sub-Sieve
SF	3 - 4 μm	0.4 - 0.7 μm
TF	9 - 10 μm	0.8 - 1.1 μm
TG-1	15 - 18 μm	1.9 μm
TG-2	20 - 24 μm	3.8 μm
TG-3	25 - 28 μm	5.0 μm

Package: 25kg/drum