

MoS₂ POWDER

COMPOSITION

Pure **Spanjaard Molybdenum Disulphide (MoS₂)** powder. The only difference between Technical Fine and Superfine is the micron size of the particles. Both types represent the highest degree of purity possible. Technical Fine is most commonly used. Superfine is a lower micron size grade.

USES

Spanjaard MoS₂ Powder is often the only possible solution for problems arising from the lubrication of mechanisms and precision instruments, in cases where the use of conventional lubricants is undesirable, due to the agglomeration of dust and other abrasive matter which will impede proper operation.

It is also used as an additive in the manufacture of self-lubricating long-life parts manufactured from plastic materials such as nylons, teflons, rubbers, plastics, packing etc.

There are many applications in industry, with particular reference to the Textile, Petrochemical, Mining and Food Industries with excellent techno-economic results. The use of a dry powder lubricant is often vital in the prevention of dust accumulation, as would be the case if conventional/synthetic wet lubricants are used. Furthermore, there would be no dripping of lubricant onto sensitive parts.

SOME SPECIFIC APPLICATIONS

- Ventilators exposed to high temperatures.
- Wire drawing.
- The manufacture of rolled sections and piping.
- Lubrication of machine tools (chucks, spindles, benches, slide-ways), and of machine cutting tools, drills and saws.
- Cold shaping of stainless steel.
- For application to super-finished surfaces after honing, drum polishing or diamond finishing

- Threaded unions in valves and pipe-work in the presence of pure oxygen.
- For the lubrication of measuring instruments and other precision equipment in the aeronautic, optical, maritime, meteorological, electronic and nuclear fields.
- In the assembly of moving parts, where the use of Spanjaard Anti-Scuff Paste or Spanjaard Anti-Scuff Spray is not practical.

ADVANTAGES

Some other excellent applications and advantages are:

- As a substitute for graphite in packings, with the object of giving longer life.
- For the formation of protective and lubricating surfaces with a load-bearing capacity of 28 000kg/cm² eliminating metal-to-metal contact and reducing friction by up to 60%.
- For the solution of maintenance problems where conventional lubricants are ineffective.
- **Spanjaard MoS₂ Powder** is non-toxic and will not form gums.
- **Spanjaard MoS₂ Powder** is insensitive to ageing.

METHOD OF APPLICATION

1. It is essential that surfaces on which Technical Fine and Superfine powders are applied be absolutely clean and free from rust.
2. Apply powder in fine layers, using a clean rag which does not fray or, preferably, a chamois.
3. Best results are obtained by rubbing surfaces strongly in all directions.
4. Remove surplus.
5. Mass produced parts can be easily coated by rotating them in a cylinder into which a suitable quantity of powder has been introduced.

Certified as an
ISO 9001 Manufacturer
by the SABS

Manufacturers & Distributors of
Special Lubricants & Allied
Chemical Products

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TECHNICAL SPECIFICATION

Chemical formula	MoS ₂
Colour	Bluish-grey
Density	0.3 to 0.4 g/cm ³
Purity Technical Fine	>98%
Superfine	>97%
Acid Insolubles Technical Fine	0.5% max
Superfine	0.5% max
Water Technical Fine	0.05% max.
Superfine	0.15% max.
Particle size:	
Technical Fine - Fisher µm	0,65 - 0,80
Superfine - Fisher µm	0,40 - 0,45
Molecular structure	Hexagonal crystalline, one layer of Molybdenum atoms between two layers of sulphur atoms
Friction factor	0,03 - 0,06
Thermal stability	Air - 70°C - 450°C
Resistance to oxidation	Air - up to 450°C Argon - up to 1500°C Other inert gases - up to 1150°C
Resistance to radiation	Total
Fusion point	1600°C
Resistance to pressure	Static - 2 750 000 kPa (400 000 psi)
Chemical stability	Insoluble in water, in most solvents, in acids and in bases.
Oxidation	Slow in pure oxygen
Conductivity	High resistance at low potential differences, diminishing with increasing potentials.
Ageing	Nil
Toxicity, International Specification	Nil, without noxious effects to the health. Both MoS ₂ powders comply with Specification MIL-M-7866A

PACKAGING



PACK SIZE	CARTON CONFIGURATION	GRADE
1kg tin	12 x 1kg per carton	Technical Fine
2,5kg tin	4 x 2,5kg per carton	Technical Fine/Superfine
100kg drum	4 x 25kg valve pack bags	Technical Fine
50kg drum		Superfine

CP/mg/MoS₂PDR – June 2016

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