

Specification of Silver Molybdenum di Sulphide Graphite (AgMoS₂-Graphite) Brushes for Electrical Contacts

1. Scope

This document stipulates the requirement of silver molybdenum di sulphide graphite (AgMoS₂-Graphite) brushes for use in sliding electrical contacts of space mechanisms. The brushes are to be used in deep space vacuum of 10⁻⁸ mbar in the temperature range of -50 °C to +100 °C. High electrical and thermal conductivity, low wear rate, good surface finish is the major requirement for these brushes. The brushes should be supplied in final machined condition as per the drawing.

2. Material

Sintered composite of Silver, Molybdenum Disulphide and graphite as given

Material	Silver	Graphite	MoS ₂
% by Weight	85 ± 2%	3 ± 1%	Balance

3. Quantity

Type	P1	S2
Quantity	6,000	6,000

4. Material manufacturer:

Details of original manufacturer and country of origin shall be stipulated clearly in the offer itself. Manufacturer shall have minimum experience of 10 years and details of previous experience shall be indicated.

5. Material properties

Data sheets containing following material properties shall be given with the offer.

No	Parameter	Reference Values (Any deviation from these values shall be indicated)
1.	Density	8 g/cc
2.	Thermal conductivity	200 W/m-k
3.	Specific Heat Capacity	350 J/kg-K
4.	Continuous operating temperature	> 120 °C
5.	Allowable current density	46 A/cm ²
6.	Vacuum Compatibility	TML < 1% and CVCM < 0.1%

Material conformity certificate should be provided along with the supply of item.

