

## Zircar Ceramics MOSI2 Molybdenum Disilicide Heating Element

Category : Ceramic , Oxide , Silicon Oxide

### Material Notes:

ZIRCAR Molybdenum Disilicide Heating Element Type MOSI2 is an electric element principally containing molybdenum disilicide for use in industrial and laboratory furnaces. Elements fabricated of this unique material support high power densities on their surface (e.g. 20 W/cm<sup>2</sup> of element surface area at an element temperature of 1700°C, 14 W/cm<sup>2</sup> at 1800°C and 5 W/cm<sup>2</sup> at 1900°C), can be cycled rapidly, and provide up to 10KVA / sq. ft. power density in rapid cycle and continuous furnace applications. 3 grades are available with maximum element temperatures of 1700°C, 1800°C and 1900°C in air. Made of molybdenum disilicide based cermets MOSI2 heating elements withstand oxidation at very high temperatures. Their surface is protected by of a thin layer of silica glass that forms when they are exposed to oxygen at elevated temperatures. Although the base cermet is consumed in the formation of the silica "skin" the rate of decomposition is minimal. They provide long performance at elevated temperatures while delivering high power. Typical Applications: Heating source in furnaces and industrial process equipment operating to 1800°C (3272°F). Elements in production, laboratory and research furnaces for annealing, heat treating, forging, ceramic and metal sintering, glass and metal melting, holding & refining, testing and gem enhancement. Information provided by Zircar Ceramics.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Zircar-Ceramics-MOSI2-Molybdenum-Disilicide-Heating-Element.php](http://www.lookpolymers.com/polymer_Zircar-Ceramics-MOSI2-Molybdenum-Disilicide-Heating-Element.php)

Physical Properties	Metric	English	Comments
Density	5.50 - 5.60 g/cc	0.199 - 0.202 lb/in <sup>3</sup>	
Porosity	<= 2.0 %	<= 2.0 %	

Mechanical Properties	Metric	English	Comments
Hardness, Mohs	7.5 - 7.8	7.5 - 7.8	
	@Temperature 26.9 °C	@Temperature 80.3 °F	
Tensile Strength	>= 190 MPa	>= 27600 psi	
	@Temperature 1530 °C	@Temperature 2780 °F	
Flexural Strength	>= 350 MPa	>= 50800 psi	
	@Temperature 26.9 °C	@Temperature 80.3 °F	
Impact	0.70	0.70	Impact Strength, MPa

Thermal Properties	Metric	English	Comments
CTE, linear	7.00 - 8.00 µm/m-°C	3.89 - 4.44 µin/in-°F	

Optical Properties	Metric	English	Comments
Emissivity (0-1)	0.74 - 0.82	0.74 - 0.82	

Electrical Properties	Metric	English	Comments
Volume Resistivity	0.000353 ohm-cm	0.000353 ohm-cm	

## Contact Songhan Plastic Technology Co.,Ltd.

Website : [www.lookpolymers.com](http://www.lookpolymers.com)

Email : [sales@lookpolymers.com](mailto:sales@lookpolymers.com)

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China