

# Liaoning Jiashun Chemical Science and Technology Co., Ltd

[www.jiashun-mgo.com](http://www.jiashun-mgo.com)

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## M-series

### Moisture proof high temperature electrical grade MGO powder

#### Features and applications:

M-series is moisture proof high temperature electrical grade MGO powder (moderate or heavy silicone treatment). There are five different grades. M-series is used for manufacturing moderate-high temperature air heating elements. M-series is unadvisable to do high temperature heat treatment, such as 1050C annealing. M-series has very good moisture proof performance. We suggest simple sealing. Before sealing, we suggest dry process at 200-350C to elements.

#### Main chemical composition:

Grades	Main chemical composition %					
	MgO	CaO	Al <sub>2</sub> O <sub>3</sub>	Fe <sub>2</sub> O <sub>3</sub>	SiO <sub>2</sub>	LOI
<b>JS-M9</b>	≥97.5	≤1	≤0.9	≤0.3	≤1.5	≤0.1
<b>JS-M8</b>	≥97	≤1.5	≤0.9	≤0.4	≤2	≤0.1
<b>JS-M7</b>	≥96	≤2	≤0.9	≤0.5	≤2.5	≤0.15
<b>JS-M6</b>	≥95.5	≤2	≤0.9	≤0.6	≤3	≤0.2
<b>JS-M5</b>	≥94.5	≤2.5	≤0.9	≤0.6	≤3.5	≤0.2

Model No.	Grade	Suggested Application	W/cm <sup>2</sup>
JS-M9	A	750C (air heating)	<8.5W/cm <sup>2</sup>
JS-M8	B	700C (air heating)	<8W/cm <sup>2</sup>
JS-M7	C	600C (air heating)	<7W/cm <sup>2</sup>
JS-M6	D	450C (air heating)	<5W/cm <sup>2</sup>
JS-M5	E	400C (air heating)	<4W/cm <sup>2</sup>

#### Mesh Analysis:

Mesh	+40	+60	+80	+140	+200	+325	-325
Particle size (μm)	+425	+250	+180	+106	+75	+45	-45
Content (%)	≤0.5	26±6	25±6	25±6	12±3	11±3	5±3

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**Remark:** Contents of +425  $\mu\text{m}$  and -45  $\mu\text{m}$  are controlled tightly. In order to acquire needed tap density and flow rate, other contents will be adjusted. (Custom-made for special specifications)

**Tap density:** T.D. ( $\text{g}/\text{cm}^3$ ) : 2.30-2.45  $\text{g}/\text{cm}^3$

**Flow rate:** (F.T. s/100g) : 35 $\pm$ 4

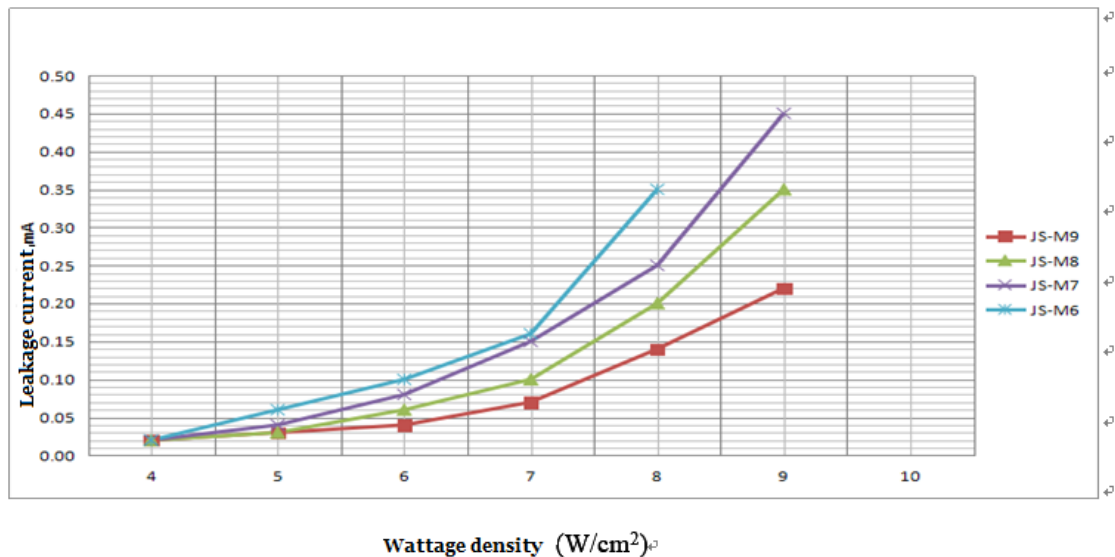
(F.R. s/100g) : 175 $\pm$ 20

**Package:** 25KG/Carton, 1MT/pallet; Ton bag; Plastic bucket

### Safety and storage:

Electrical grade MGO powder is non-toxic, but with tiny amount of dust. We suggest to use mask and gloves in application. MGO powder should be stored in dry places. Storage time suggested is less than 12 months after delivery.

### Leakage Current VS Surface Wattage Density



### Test Conditions:

Tube material: SUS304,  $\phi$  8.0 $\times$ 0.5, Length 500, resistance wires: 0Cr25AL15,  $\phi$  0.35mm, coil diameter  $\phi$  2.3mm

Shrink tubing: 8.0 $\rightarrow$  $\phi$  6.6mm, heating length: 450 $\pm$ 10mm, Dry process: 250 $^{\circ}\text{C}$ /1Hr, energization time: 30Min

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Grade	Main Electrical Specifications									
	Cold		Leakage current when heating(mA)						Humidity-state	
	Insulation MΩ	HipotV/ 1mA	4W /cm <sup>2</sup>	5W /cm <sup>2</sup>	6W /cm <sup>2</sup>	7W /cm <sup>2</sup>	8W /cm <sup>2</sup>	9W /cm <sup>2</sup>	Insulation MΩ	Hipot V/1mA
<b>JS-M9</b>	≥2000	≥2500	0.02	0.03	0.04	0.07	0.14	0.22	≥2000	≥2500
<b>JS-M8</b>	≥2000	≥2500	0.02	0.03	0.06	0.1	0.2	0.35	≥2000	≥2500
<b>JS-M7</b>	≥2000	≥2500	0.02	0.04	0.08	0.15	0.25	0.45	≥2000	≥2500
<b>JS-M6</b>	≥2000	≥2500	0.02	0.06	0.1	0.16	0.35	---	≥2000	≥2500
<b>JS-M5</b>	≥2000	≥2500	0.02	0.15	0.35	---	---	---	≥2000	≥2500

## Special Introduction:

**M-series** is special high temperature MGO powder with new research and development. It is used for manufacturing air heating elements without high temperature heat treatment (1050C annealing). M-series can stand 750C air heating temperature. Compared with normal high temperature powder from other China suppliers, M-series has following quality advantages.

### 1, Very good moisture proof performance

Insulation of high temperature MGO powder from other suppliers can come to 1000MΩ only. Some of them have no moisture proof performance.

**Insulation of M-series can come to 2000MΩ.**

Without sealing, after Humidity test (humidity 92%, 50C) 72 hours, there is no decline of insulation. With good moisture proof performance, we can improve production cycle; lower requirements of sealing materials. Simple sealing with common silicone.

### 2, very good high temperature resistance

Application temperature can be up to 750C. High temperature MGO powder also has moisture proof performance.

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## **3, Low dust**

It makes good surroundings when filling powder.