



Atlas Way, Sheffield, UK, S4 7QQ  
Tel: +44 (0)114 225 0600  
Fax: +44 (0)114 225 0600

## MATERIAL DATA SHEET

Material/Trade Name – Ceramic / Ferrite

### 1 - Substance Identification

Material/Trade Name -	Ceramic / Ferrite
Material Type -	Strontium or Barium
Company -	Eclipse Magnetics Ltd
Address -	Atlas Way, Atlas North, Sheffield S4 7QQ
Telephone -	0114 2250600
E-Mail -	info@eclipsemagnetics.com

### 2a – Ceramic 1 - Composition Weight %

Substance -	Fe <sub>2</sub> O <sub>3</sub>
	SrO
	CaO
	Al <sub>2</sub> O <sub>3</sub> -2SiO <sub>2</sub> -2H <sub>2</sub> O

### 2b – Ceramic 5 - Composition Weight %

Substance -	Fe <sub>2</sub> O <sub>3</sub>
	SrO
	CaO
	Al <sub>2</sub> O <sub>3</sub> -2SiO <sub>2</sub> -2H <sub>2</sub> O

### 2c – Ceramic 8 - Composition Weight %

Substance -	Fe <sub>2</sub> O <sub>3</sub>
	SrO
	CaO
	Al <sub>2</sub> O <sub>3</sub> -2SiO <sub>2</sub> -2H <sub>2</sub> O

### 2d – Ceramic 8C - Composition Weight %

Substance -	Fe <sub>2</sub> O <sub>3</sub>
	SrO
	CaO
	Al <sub>2</sub> O <sub>3</sub> -2SiO <sub>2</sub> -2H <sub>2</sub> O

### 3 – REACH

Ferrite / Ceramic materials contain no SVHC (Substances of Very High Concern) either in ingredients or in preparation



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**4 – Hazard Identification**

Strontium Hexaferrite is not listed in EH40 Occupational Exposure Limits or other listings of hazardous or toxic materials.

The handling of Strontium Hexaferrite magnets in the clean unmagnetised state causes no hazards to health. Hazards arise when they are ground or magnetised

Fine powders and grinding slurry may cause irritation to eyes, skin & respiratory systems.

Only trained personnel should handle magnetised magnets.

Food & drink should be prohibited in the vicinity of the machining and finishing operation.

Flash Point - None

**5 – First Aid Measures**

Inhalation - Remove to fresh air area  
 Inform first aider

Eyes - Flush dust from eyes with water  
 Inform first aider

Skin - Wash with soap & water  
 Inform first aider

Ingestion - Give plenty of water to drink  
 Do not induce vomiting  
 Inform first aider

**6 – Fire Prevention**

Non Combustible

**7 – Handling & Storage of Magnetised Products**

Due care should be taken when handling fully magnetised material as physical injury may occur through entrapment of body parts caused by the inadvertent attraction of magnetised material to other similar or ferro-magnetic material.

Close proximity to the magnetic field from magnetised material may effect the operation of heart pacemakers.

**8a – Properties (Magnetic)**

	<b>Br (Gauss)</b>	<b>bHc (Oersted)</b>	<b>iHc (Oersted)</b>	<b>BH Max (MGO)</b>
Ceramic 1	2,200	1,700	2,750	1.0
Ceramic 5	4,000	2,000	2,300	3.5
Ceramic 8	3,700	2,800	3,250	3.3
Ceramic 8C	4,300	2,500	2,550	4.3



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### 8b – Properties (Thermal)

	Reversible Temperature Coefficient of Br (%change/°C)	Curie Temperature (°C)	Maximum Working Temp (°C)
Ceramic 1	-0.2	450	350
Ceramic 5	-0.2	450	350
Ceramic 8	-0.2	450	350
Ceramic 8C	-0.2	450	350
Ceramic 1	-0.2	450	350

### 8b – Properties (Thermal)

	Density (g/cm <sup>3</sup> )	Tensile Strength (PSI)	Transverse Modulus of Rupture (PSI)	Hardness (Mohs)	Coefficient of thermal expansion (10 <sup>-6</sup> per °C)	Electrical Resistivity at 20°C (Ohm-cm x 10 <sup>-6</sup> )
Ceramic 1	4.9	5000	9000	7	10	10
Ceramic 5	4.9	5000	9000	7	10	10
Ceramic 8	4.9	5000	9000	7	10	10
Ceramic 8C	4.9	5000	9000	7	10	10
Ceramic 1	4.9	5000	9000	7	10	10

### 9 – Stability and Reactivity

Stable at all temperatures  
 Avoid moist atmospheres

### 10 – Disposal Considerations

Do not dispose into watercourses  
 Use only licensed contractors  
 Dispose in accordance with Special Waste Regulations 1996

### 11 – Transport Information

Not Classified as Hazardous for Transportation by air. Magnetic fields within 0.00525gauss at 15 feet, as legislation states.

This data sheet is needed to accompany our commercial invoice with freight.

### 12 – Regulatory Information

- |                         |   |
|-------------------------|---|
| 1 – Risk & Safety -     | Avoid Entrapment of Body Parts<br>Dispose of material in a safe way                                     |
| 2 – Other Regulations - | Health & Safety at Work Act 1974<br>Environmental protection Act 1990<br>Special Waste Regulations 1996 |