

# energy savings

flexible

# MicaSIL™

## slip plane insulation



MicaSIL-C™



MicaSIL-P™

MicaSIL™ creates a slip plane between the induction coil and the refractory in induction furnaces:

- Saves substantial energy costs by preventing heat loss in the crucible
- Dampens expansion of crucibles, preventing damage to the coils
- Serves as an electrical barrier against leakage currents and flash-overs
- Serves as an additional wall in case of leak-through of molten metal
- Prevents moisture and gasses from the melt to condense on the coils, preventing premature coil failure
- Facilitates easy removal of crucible with the mica side towards the refractory
- Enables quick economic pre-sintering of the refractory when wrapped around reusable formers



<http://www.sahney.com/composites.htm>



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# MicaSIL™

## Technical Information



(front to back) MicaSIL-P™, MicaSIL-C™, MicaSIL-Sp™

### Composition

MicaSIL™ is an electro-thermal insulation. It is a flexible composite material consisting of phlogopite mica paper or muscovite mica splittings, bonded with silicone resin. It is available plain, or laminated with glass cloth, ceramic felt, or wire mesh.

### Applications

These flexible and thermally resistant sheets are mainly used as slip plane insulation between the crucible and induction coil in induction furnaces.

MicaSIL™ protects the induction coil from the expansion forces of the refractory, serves as barrier against leakage currents, and acts as a slip plane, facilitating removal of the crucible.

### Product Data

Type	Composition	Availability	Thickness	Dielectric Strength	Thermal Conductivity	Temperature Resistance
MicaSIL-P™	Phlogopite plain mica paper — no backing	Roll or sheet form	~0.5 mm	>15 kV/mm	~0.7 W/m <sup>2</sup> K	1000°C
MicaSIL-C™	Phlogopite mica paper with ceramic felt on one side	Roll or sheet form	~3.5 mm	>7 kV	~0.12 W/m <sup>2</sup> K	1000°C
MicaSIL-G™	Phlogopite mica paper with glass cloth on one side	Roll or sheet form	~0.5 mm	>12 kV/mm	~0.7 W/m <sup>2</sup> K	1000°C
MicaSIL-2G™	Phlogopite mica paper with glass cloth on both sides	Roll or sheet form	~0.5 mm	>10 kV/mm	~0.7 W/m <sup>2</sup> K	1000°C
MicaSIL-R™	SS Wire mesh with phlogopite mica paper on both sides	Sheet form	~1.0 mm	N/A	N/A	1000°C
MicaSIL-Sp™	Muscovite mica splittings with glass cloth on both sides	Roll or Sheet form	~0.5 mm	>10kV/mm	~0.3 W/m <sup>2</sup> K	600°C

### Available sizes

Sheet: 950 mm x 1000 mm ± 10 mm

Roll: 950 mm x 10 m lengths



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