



ELMELEC VAPORSHIELD PLUS PAT PENDING

CVM 30 SRP Type 2

Many foundries would like to save money by making use of some galvanized scrap in their melts. They are often prevented from doing this by the possibility that zinc vapour could condense onto the induction coil, causing inter-turn shorting. Other metals such as lead, tin and cadmium can cause similar problems.

Vapourshield has been developed for customers who have already encountered problems caused by metal vapour deposition and also for customers who would like to increase the galvanised content of their scrap. The Type 2 version is particularly designed for use in mains and medium frequency induction furnaces, where appropriate. With respect to suitability, reference should be made to the relevant Vapourshield Suitability Guides, prior to use.

Grade CVM 30 SRP is a flexible laminate material, supplied in roll form, made from of silicone bonded phlogopite mica paper laminated to a 2mm layer of ultra high performance SM (Silica-Magnesia) paper. Between these two layers lies a thin layer of stainless steel foil. It is the stainless steel foil which prevents vapour penetration, but by being position between the mica and the refractory paper, it is electrically insulated and the full slip-plane characteristics of the mica is retained.

Three additional enhancements.

1. Metal Penetration Alarm.

Vapourshield Plus, with its stainless steel core, can be attached to the earth-leakage system of an induction furnace. Were the melt to penetrate the crucible and come in contact with the earthed Vapourshield core, an alarm can be triggered and the furnace made to shut down. In this way a major Health and Safety gain can be achieved.

2. Metal Penetration Barrier.

Depending on the temperature of the melt, Vapourshield Plus can be an effective, if temporary, barrier to metal penetration to the coil grout and beyond to the coil. In this way Vapourshield Plus may be able to prevent catastrophic damage to the coil from occurring.

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3. Improved Push-out Characteristics.

One of the many benefits of using mica based slip-plane materials in the lining of coreless induction furnaces, is the improved push-out performance that they provide. It has been shown that the addition of the internal stainless steel layer within Vapourshield Plus, has significantly added to the performance of our standard slip-plane materials in this regard.

Technical Data

Dielectric strength	>6.0 kV/layer
Tracking resistance	class KA3c
Heat conductivity at 500°C mean temp	approx 0.09 W/m°C
Heat resistance	1200°C / 2200°F *

Availability

Roll width	1020 mm / 40"
Foil width	1000 mm / 39 ³ / ₈ "
Nominal thickness	3.45 mm / 0.136"
Standard roll lengths	10, 12.5, 25 meters 32.8, 41, 82 ft

* At these elevated temperatures some deterioration in the binders may occur.

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