Technical Data Sheet

E3C-CA
Electrolytic Cell Connection Compound – Chloro-alkali Grade

Product Description

E3C-CA has been specially developed for use on connections and switches in electrolytic, electro-plating and anodising plants. Its unique formulation protects metal interfaces from oxidation and corrosion in harsh chemical environments whilst maintaining a low and consistent contact resistance, thereby preventing build up of unwanted heat and minimising energy consumption.

The use of E3C-CA significantly improves and maintains current flow and is particularly suitable for low voltage/high current circuits (e.g. 5V-24V at 25,000A-250,000A). By stabilising and minimising contact resistance at all connection points, use of this specialist compound provides an even current distribution and exceptionally low mV drop between contacting surfaces. E3C-CA provides superior electrical performance to give optimum electrical process conditions.

Regular application of E3C-CA minimises production downtime required for cleaning contacts and connections by preventing the build up of tarnish and corrosion on the surfaces, even in harsh conditions such as chlorine and high acidity environments. It has been specifically designed to offer superior performance as a non-melting compound, preventing contamination of the electrolyte. It will therefore remain unaffected by the working environment without evaporating or 'drying out' under normal conditions.

E3C-CA has excellent material compatibility however, as in all applications; it is recommended that compatibility tests are carried out on sensitive materials, particularly thermoplastics, prior to large scale application.

Features

- Reduces contact resistance and mV drop at all connections and switches
- Reduces temperature at all contacting surfaces
- Reduces energy losses given off as heat
- Improves plant reliability and productivity
- Reduces maintenance costs
- Wide operating temperature range
- Excellent corrosion protection and oxidation stability
- Silicone free

Approvals: **RoHS Compliant (2002/95/EC):** **Yes**

Typical Properties:

Colour	Cream
Density (g/ml)	0.85
Temperature Range (°C)	-50 to +160
Evaporation Weight Loss (% 7 days @ 100°C)	<1.5%
Evaporation Weight Loss (% 7 days @ 125°C)	1.6%
Copper Strip Corrosion (IP154 / ISO 2160)	≤1b
Drop Point (IP32 / ISO 2176 (°C))	>200

Cone Penetration Un-Worked (ASTM D 217 @ 20°C)	325
Cone Penetration Un-worked (ASTM D 217 @ -40°C)	225
Cone Penetration Worked (ASTM D217, 60 strokes @ 20°C)	330
Consistency (NLGI)	1
Bleed / Separation (IP121)	<5%
Silver Corrosion (DIN 51759, 3 hrs @100°C)	No change
Plastics Compatibility - ABS	Test
Plastics Compatibility - PC	Test

Packing	Order Code	Shelf Life	Container Dimension
10kg Bulk	EE3C-CA10K	72 Months	254mm (Diameter) x 330mm (Height)

Directions for Use

E3C-CA Compound should be applied to contacting surfaces either manually, and preferably with friction, or using a fully automated application process incorporating a follower/pusher plate with the dispensing system.

Typical Product Applications

EC3C-CA Compound prevents corrosion and contamination, and improves electrical contact on anode and cathode bars and rails, V-joints, pick-up shoes, rack contacts, bus-bar joints etc.