

CABLEGARD

COLD APPLIED ANTICORROSIVE GREASE
FOR OVERHEAD CONDUCTORS

VAPOR-TEK
THE POWER TO PROTECT

THE PROBLEM

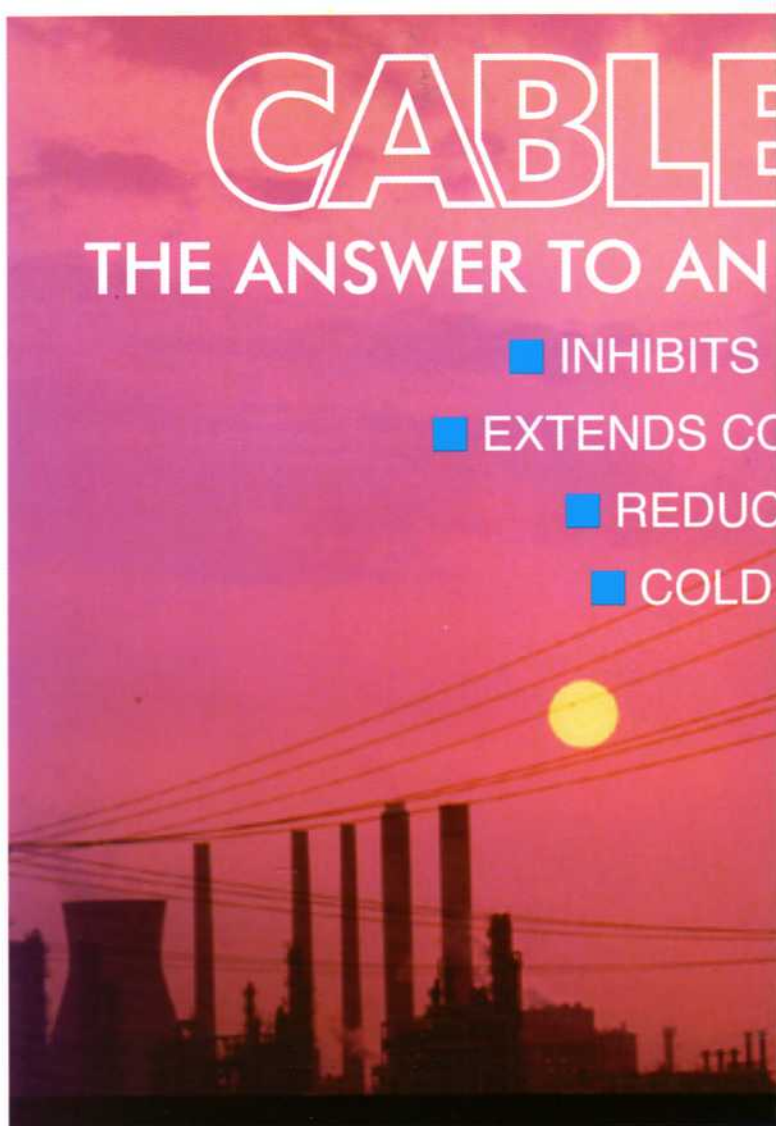
Most overhead power cables/conductors consist of aluminium strands, sometimes re-inforced by central strands of galvanised steel (ACSR's).

Although aluminium is generally considered to be fairly corrosion resistant, it is prone to crevice corrosion. A stranded conductor inevitably presents many crevices, as each strand is in contact with its neighbours. Importantly, the zinc of the galvanised re-inforcing strands of ACSR's is also prone to crevice corrosion.

The most corrosive atmospheres are generally encountered in salt-laden coastal regions and in industrial areas with their atmospheric pollutants such as sulphur dioxide. Given that much of the world's population and its accompanying industry is concentrated in coastal regions, both salt and acid pollutants are frequently found together. Clearly the life of a conductor is determined by the degree to which it can withstand this corrosive cocktail.

The traditional method of combating corrosion has involved the application of a molten grease during the manufacture of the conductor. This entails maintaining a large thermally insulated reservoir of permanently molten grease and pumping it to the point(s) of application. The process is somewhat hit-or-miss and generally fails to completely fill the crevices between the conductor strands. In fact, specifications call for only a 65% minimum of the theoretical fill – leaving as much as 35% of the length of the conductor unprotected. ***A chain is only as strong as its weakest link!***

At least as important as filling the conductor is that the grease should be an effective corrosion protective for aluminium, zinc and steel, both individually and also in mutual contact to prevent galvanic corrosion. In tests – and in practice – most widely used hot applied greases fail to come up to the highest standards in this respect.



CABLE

THE ANSWER TO AN

- INHIBITS
- EXTENDS CO
- REDUC
- COLD

COST SAVINGS

SHORT TERM

Naturally, the cost of the high performance Cablegard anticorrosive is *initially* a little more than that of relatively crude hot-applied greases. However, this is largely offset by the savings due to –

- Ease of application.
- Elimination of heating and capital costs associated with storing and pumping molten grease.
- No trace-heated pipework to install and maintain.
- Cleaner, less messy operation.
- Improved safety compared to the handling of hot molten grease.

PROVEN PERFORMANCE

Cablegard has been independently tested and approved by a number of leading electricity suppliers and major conductor manufacturers. Even more important is Cablegard's proven performance in actual usage on conductors installed around

CABLEGARD

EXPENSIVE PROBLEM

CORROSION

CONDUCTOR LIFE

REPLACEMENT COSTS

CABLEGARD APPLIED



LONG TERM – 'THE BOTTOM LINE'

The greatly superior protective properties of Cablegard, together with the complete fill of the conductor, will considerably extend the useful life of conductors. This, allied with reduced maintenance, offers long-term savings many orders of magnitude greater than the (relatively tiny) extra cost of the Cablegard which is infinitesimal when the overall costs are taken into account –

- The cost of the pylons. ■ The conductors themselves.
 - Stranding. ■ Conductor erection.
 - And, most of all ...
- replacement of corroded conductors.*

THE RESULT IS MAJOR LONG-TERM COST SAVINGS.

various parts of the world. It has been shown to give much greater protection from corrosion than the more traditionally used hot applied greases. In fact, not a single instance of failure has been reported in over two decades.

THE SOLUTION

Cablegard is the easily applied anticorrosive that reaches where others cannot and performs where those others fail. By this means it extends conductor life, thereby offering the world's power generators and distributors major cost savings.

UNIQUE PATENTED FORMULATION

Cablegard consists of a synergistic blend of corrosion inhibitors, penetrating aids, metals' deactivators and age resisters in a highly refined, gelled mineral oil. It protects all major metals and alloys and is especially effective on steel, aluminium and zinc.

COLD APPLIED

Cablegard is applied during manufacture of the conductor *at room temperature* – straight from the drum as received. The need for the melting, storing, pumping and application of a molten grease is entirely eliminated. Cold application makes for a much cleaner operation than that of a molten grease where strict temperature control – and therefore, viscosity – is very hard to achieve, making the operation both messy and difficult to control.

STAYS IN PLACE

Cablegard is fluid at room temperature during pumping and application. However, once it has been applied to the conductor it immediately re-gels and stiffens to a grease-like consistency (it is highly pseudoplastic) to remain firmly in place.

FILLS THE CONDUCTOR COMPLETELY

Unlike hot-applied greases, Cablegard's unique viscosity and flow characteristics enable the entire conductor to be 100% filled to ensure complete protection. In this way the crevice corrosion, which is the main cause of failure, is eliminated.

WILL NOT MELT OR DRAIN AWAY

Cablegard's unique gelling, or thickening, system imparts excellent high temperature properties to the product. It will not melt, even at temperatures as high as 200°C. In short, it stays where it is put, regardless of the highest temperatures likely to be encountered.

HEALTH & SAFETY

Cablegard has been assessed in accordance with current CHIPS (Chemicals, Hazard Information and Packaging for Supply) and is not classed as hazardous for supply.

However, Cablegard is a mineral oil based product and common sense dictates that the normal precautions and hygiene associated with the handling of greases should be observed. Oil resistant protective clothing and eye protection should be worn where appropriate.

TRANSPORTATION

No special packaging or labelling is required for the carriage of Cablegard by road, rail or air as it is not classed as hazardous for transportation.

The CCCN (Customs Co-operation Council Nomenclature) for Cablegard is 27100 99 0.

STORAGE

Cablegard does not deteriorate in storage, even when this is prolonged.

The product should not be stored at temperatures below freezing immediately before use as the grease will stiffen to make pumping and application to conductor difficult.

Avoid contamination with other oils and greases or water.

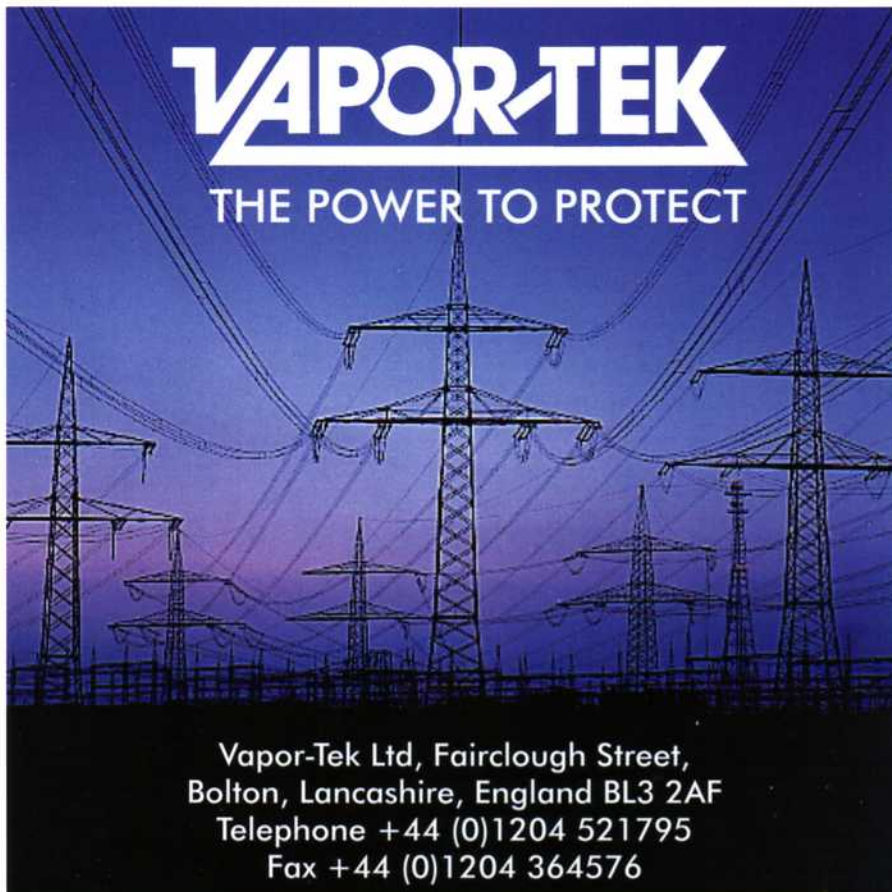
DISPOSAL

This must be done in accordance with local regulations.

TECHNICAL SERVICE

All Vapor-Tek products are backed by comprehensive technical and laboratory services, including research and test facilities.

Qualified staff are on hand to discuss the use of Vapor-Tek products and to advise on general problems of corrosion.



VAPOR-TEK
THE POWER TO PROTECT

Vapor-Tek Ltd, Fairclough Street,
Bolton, Lancashire, England BL3 2AF
Telephone +44 (0)1204 521795
Fax +44 (0)1204 364576

e-mail:
info@vapor-tek.co.uk

website:
www.vapor-tek.co.uk