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Number 35

APPLICATION NOTE

Post-application Discoloration/Tinting of Stabilant 22 Films

What is Stabilant 22?

Stabilant 22 is an initially non-conductive block polymer that under the effect of an electrical field and/or when used in a very narrow gap between metal contacts, becomes conductive. The electric field gradient at which this occurs is set so that the material will remain non-conductive between adjacent contacts in a multiple pin environment.

Thus, when applied to electromechanical contacts, Stabilant 22 provides the connection reliability of a soldered joint without bonding the contact surfaces together.

While Stabilant 22 exhibits surfactant action it is *not* sold as a contact cleaner. Equally, it exhibits quite good lubricating properties but is *not* sold as a contact lubricant. Its primary strength is in its *active properties* when used in a connection and the other properties are a bonus.

What causes color-tinting of Stabilant films on contacts?

Some customers have commented that when Stabilant 22 was used on some contacts, the film has acquired a pale-colored tint (ranging from indigo through green) and have expressed concern over this phenomenon.

It occurs primarily because of minute amounts of corrosion being present either on the surface of the connector material, in locations where there are pinholes in the precious-metal plating that is often employed, or at the non-plated and therefore unprotected contact-edges of card-edge male contacts. The application of the Stabilant lifts and dilutes these trace corrosion products producing the visible color change. Many metal oxides or corrosion complexes are often highly colored (as demonstrated by their use in artist's pigments) and a very minute amount can result in a tinting of the otherwise colorless Stabilant film. Part of Stabilant's beneficial action is its ability to keep these from interfering with the actual contact interface.

If this coloration is of concern, reapplication of the Stabilant will so dilute it as to render it negligible. However, as the color rarely has any effect on the proper operation of the connector most service personnel or manufacturers simply ignore the effect.

NATO CAGE/Supplier Code 38948

15ml Stabilant 22 (Concentrate), NATO Part # 5999-21-909-9981

15ml Stabilant 22A (Isopropanol Diluted), NATO Part # 5999-21-900-6937

15ml Stabilant 22E (Ethanol Diluted), NATO Part # 5999-21-909-9984

The Stabilants are patented. Because the patents cover contacts treated with the material a Point-of-Sale license is granted with each sale of the material.

SAFETY DATA SHEETS ARE AVAILABLE ON REQUEST

NOTICE

This data has been supplied for information purposes only. While to our knowledge it is accurate, users should determine the suitability of the material for their application by running their own tests. Neither D.W. Electrochemicals Ltd., their distributors, or their dealers assume any responsibility or liability for damages to equipment and/or consequent damages, howsoever caused, based on the use of this information.

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