



**D.W. ELECTROCHEMICALS LTD.**  
70 Gibson Drive, Unit 12  
Markham, Ontario  
L3R 4C2 CANADA  
Phone: (905) 508-7500  
Email: [dwel@stabilant.com](mailto:dwel@stabilant.com)

**Number 35**

## **APPLICATION NOTE**

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### **Post-application Discoloration/Tinting of Stabilant 22 Films**

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#### **Introducing Stabilant 22**

Stabilant 22 is an initially non-conductive block polymer that when used in a thin film within contacts switches to a conductive state under the effect of the electrical field. The field gradient at which this occurs is set such that the material will remain non-conductive between adjacent contacts in a multiple pin connector environment.

*Thus, Stabilant 22 provides the connection reliability of a soldered joint without bonding the contacting surfaces together!*

Contacts are generally the weakest link in any piece of electrical/electronic equipment whether it be in low current devices found in computers or higher current circuits found in automotive and aviation applications, to name only a few. The use of Stabilant 22 or its isopropanol-diluted form, Stabilant 22A, will make contacts from 10 to 100 times more reliable, eliminating costly service call-backs and ensuring customer satisfaction.

#### **What causes color tinting of Stabilant after application 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 nonplated and therefore unprotected 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

5mL Stabilant 22 (Concentrate), NATO Stock Number 5999-20-002-1112

15mL Stabilant 22 (Concentrate), NATO Stock Number 5999-21-909-9981

15mL Stabilant 22A (Isopropanol Diluted), NATO Stock Number 5999-21-900-6937

15mL Stabilant 22E (Ethanol Diluted), NATO Stock Number 5999-21-909-9984

Stabilant products 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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Printed in Canada