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Number 002

APPLICATION NOTE

Use of Stabilant 22 in Computing and Peripheral Equipment

Introducing Stabilant 22

Stabilant 22 is an initially non-conductive block polymer which when used in a thin film between metal contacts becomes conductive under the effect of an electrical field. This occurs at an electric field gradient such that the material will remain nonconductive between adjacent contacts in a multiple pin environment. In addition, Stabilant 22 exhibits surfactant action as well as lubrication ability, providing a single component resident solution to virtually all contact problems.

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

In this note we outline applications of Stabilant 22 in the computer field. Finally, a few of the most relevant frequently asked questions are addressed. For detailed information on applying Stabilant 22 and answers to various questions, please also refer to Application Note #001.

Using Stabilant 22 in computers and other digital equipment

The use of Stabilant 22 in computers can reduce the number of hardware related problems that cause a system to lock up or 'crash'. It is applied internally to card edge connectors (plugin boards, memory modules, etc.) and connectors for power, disk drives and connections to motherboards. Stabilant protects all of these from corrosion that would thrive in conditions of vibration, humidity, temperature cycles. Connections between computers and external devices such as video, mouse, keyboard, speakers and microphones and all USB connectors can be more vulnerable to such problems, and these can also be made more reliable by applying Stabilant 22.

Stabilant 22 for test gear – computerized and analog versions

Stabilant 22 treatment of all electronic connectors will make operation of the equipment less prone to erratic behavior. In the case of USB connected or older bus-controlled equipment such as IEEE_488A (aka GPIB), Stabilant will cut down on the potential for system lockups.

Signal strength and low noise are maintained by applying Stabilant 22 to signal switches (rotary, push button, or slide types) and analog connectors such as BNC, old banana plug types, even socketed IC's.

Stabilant 22 use for robotic equipment

In robotics, from industrial to hobby types, the digital and analog circuits in robotic equipment benefit from improvement and protection of their connectors and switches. This includes circuit cards, internal cabling and connections to sensors and actuators, which often suffer from erratic contacts. Even environmentally sealed connectors found in industry can suffer problems that are mitigated by Stabilant treatment.

What is the best way to apply Stabilant 22 to contacts?

Stabilant 22, or the alcohol diluted product Stabilant 22A, can be applied directly to switches, connectors, etc. using the dropper bottle in our 5mL, 15mL and 50mL sizes. Microbrushes (supplied in our Stabilant 22A Service Kits) can be used to brush it on to contact surfaces. Many connectors can also be dipped into the dilute material.

Does the action of Stabilant 22/22A deteriorate with age?

Stabilant 22 completed rigorous field trials for over twelve years without showing any sign of reduced effectiveness and customers report successful use for even longer periods . It has a high molecular weight and is not prone to evaporation. Unlike some other contact treatments containing oils, Stabilant 22 does not 'varnish' when exposed to catalytic materials found in some older connector types.

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

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