



## STABILANT 22A the first resident contact enhancer

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### YOU CAN HAVE THE BEST CONTACTS IN THE WORLD!

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**Stabilant 22A** is the world's first *resident* electronic contact enhancer. Unlike cleaners, it is a *resident* material because once applied to the contacts it's left in place to work for the life of the equipment. In place, this liquid polymeric non-polar semiconductor *selectively* switches-on between the mating surfaces of each of the individual contacts, staying non-conductive between adjacent contacts. An entire connector can be treated at once!

Everyone in electronics service knows just how vulnerable the best designed units are to connector problems and how these can result in nightmare intermittents. By using **Stabilant 22A** on contacts throughout a system, you can virtually eliminate contact faults and prevent the majority of failures!

That's why a growing number of major electronics companies are now using **Stabilant 22A**. They've found that it simplifies servicing; saves time, and money; eliminates most service-recalls, and results in *bankable* customer satisfaction. To keep it simple, use of **Stabilant 22A** on an electro-mechanical contact can give the reliability of a soldered joint without forming a physical bond.

#### How are contacts supposed to work?

Ideal contacts would have two perfectly smooth surfaces in perfect contact. Reality isn't that simple! If we to enlarge the mating surfaces we would find great irregularity; our "smooth" surfaces now resemble a range of mountains! When they are mated, the contact area is much smaller than the total area. The peaks *have* been flattened, but there are interconnected valleys into which contaminants can and do find their way. In time the contamination can do a number of nasty things. The most obvious are:

The contamination might work its way between many of the contact points resulting in a reduction or elimination of contact. The thin film-build-up will cause zero crossing distortion and will seriously affect audio or RF signals.

The contamination might cause corrosion of the metal! But corrosion products occupy more space than the metal that was eaten away. This forces the contacting surfaces apart. Since most corrosion products act like non-linear resistors or semiconductors, they can cause rectification effects that can introduce weird distortion into audio and RF signals, destroy timing in logic lines, or de-modulate RF thus contaminating or interrupting the proper signals.

The result of connector faults range all the way from erratic equipment operation, intermittent and hard-to-diagnose problems, or unacceptably low Mean-Time-Between-Failure, to outright unservicability of the electronics.

### How does Stabilant 22A function?

It coats the mating surfaces in the contacts and fills the gaps between the original scattered contact points. Once in place it becomes selectively conductive, increasing the contact area. At the same time its presence prevents the entry of contaminant materials. As it has a high-detergency action it will also lift off most thin-film or corrosion products from the contact and hold them in suspension. An effective lubricant, it prevents abrasive damage within the contacts, enhances the wiping action of switches, and makes it much easier to insert IC's.

### What other characteristics does it have that are important?

**Stabilant 22A** is chemically stable with a very low vapour pressure. Unlike most light protective oils, it won't cross-link or "varnish" in the presence of high-sulphur free-machining alloys, or elastomers (containing chemicals causing cross-linking). Its very low vapour pressure means that it won't evaporate; it will probably outlast the useful life of the equipment. Its also non-toxic!

Its switching action is slow enough that it won't modulate audio signals, and the applied field gradient required to switch the material is high enough that there won't be any leakage between adjacent contacts - and the conductive area won't creep!

### How do I apply it to my connectors!

**Stabilant 22A** is easy to apply. A drop can be finger-smeared along a card-edge connector row or a swab or brush could be used. Some manufactures dip the contacts, while others prefer to use dropper bottles or even (where very large scale operations are involved) automatic dispensing units.

### How is the material packaged!

The most popular size is a 15 ml service kit of **Stabilant 22A**. It contains a 15 ml dropper bottle, five swabs, and instructions for use; all in an end-capped tube you can toss in a toolbox. Larger sizes and concentrate are available.

### Where is it used and what industries use it?

**Stabilant 22A** can be used on virtually every electro-mechanical contact with the exception of inductive-load-breaking contacts that produce strong contact arcing. It is presently used in:

Agricultural machinery, astronomical electronics, automotive [both vehicular & manufacturing], avionics, air-traffic-control radar and navigation aids, automotive electronic ignition systems, auto-sound systems, aircraft maintenance, automatic teller & banking equipment, bio-medical electronics [operating-room, intensive-care, and laboratory], cable TV, CAD/CAM, cellular telephones, communications (telephone, satellite, Telex, radio), commercial sound systems, copying equipment, educational computers and audio/visual equipment, gasoline, diesel, and jet engine systems, flashlights, geophysical electronics, home audio & video systems, home appliance maintenance, integrated circuit burn-in and testing systems, intercom systems, all type of digitally-controlled manufacturing machinery, marine navigation systems (both shipboard & land based stations), all types of military electronics, micro-mini-mainframe computers & peripherals, motion picture production & projection systems, paging equipment, oil & gas well bore-hole monitoring equipment, police communications & computers, process control, pulp & paper electronics, robotics, radio & TV broadcasting, security & alarm systems, sonar equipment, space equipment [ground-based, maintenance, and in-space], recording studios, and transportation equipment, to mention only the major ones.

**Stabilant 22A** can be used on socketed IC's, card edge connectors, D-type connectors, RCA, BNC, & XLR connectors, keyboards and key contacts, bus bar connections, cartridge fuses, coaxial connectors, RF shielding enclosure covers, rotary and slide switches, low-voltage relays, tube pins, indicator lamps, conductive elastomer type connectors; the list goes on and on.