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Number 36

APPLICATION NOTE

Stabilants on Aircraft Connectors with Fluorosilicone Inserts

- *How should Stabilants be used on connectors with fluorosilicone water-barrier inserts?*

In many aircraft connectors, a fluorosilicone washer is used at the base of the male pins to form a barrier, which when compressed by the screwing-closed of the connector, acts to form a water-exclusion barrier between the pins thus reducing both signal leakage and increasing flashover voltages.

As most solvents cause swelling of this elastomer, a connector which is "sealed" in the barrier-swelled condition might leak once the solvent dissipates and the elastomer shrinks. While the 6% swell caused by the 80% isopropanol-diluted **Stabilant 22A** will go away once the solvent evaporates, many service engineers are working on a tight time schedule and the potential exists for premature closure of the connector.

To avoid this situation, testing was done to determine a level of isopropanol dilution which would not cause a swelling problem. It was determined that a 7% by volume dilution was satisfactory. This can be achieved by adding 7 parts by volume of isopropanol (98% isopropyl alcohol) to 100 parts of **Stabilant 22** concentrate. There is sufficient air-space in the bottles to permit this but the bottle should be over-labelled as containing 7% isopropanol.

Alternately, we can supply a 7% isopropanol-diluted material under the designation **Stabilant 22P**. The MSDS's for **Stabilant 22 & 22A** will cover this material.

NATO/CAGE Supplier Code 38948: Stabilant 22 (Concentrate) - 15 mL size, NATO Part # 5999-21-909-9981 Stabilant 22A (Isopropanol Diluted) - 15 mL size, NATO Part # 5999-21-900-6937 Stabilant 22E (Ethanol Diluted) - 15 mL size, NATO Part # 5999-21-909-9984

The Stabilants are patented in Canada - 1987; US Patent number 4696832. World-wide patents applied for. Because the patents cover contacts treated with the material, a Point-of-sale License is granted with each sale of the material.

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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