

**D.W. ELECTROCHEMICALS LTD.**

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Number 21

TECHNICAL NOTE

Compatibility of Stabilant 22 with Elastomers

General

Because of the large number of individual compounds that can be formulated using each type of elastomer, we have chosen not to list specific properties such as "swell", "change in compression modulus", etc. which would have to be listed on a compound by compound basis, as it is doubtful if an engineer would encounter the exact formulations we used in our tests. Instead we ran tests on a number of the more common formulations for each type of elastomer and have based the following list on the general compatibility of **Stabilant 22** and its dilutions with that group of compounds.

Elastomer Type	S-22 Alone	+Isopropyl Alcohol	+Trichloroethane	+Fluorocarbon
Butadiene	Fair	Fair	Poor	----
Buna S	Good	Fair	Poor	Good
Butyl	Good	Good	Poor	Fair
Ethylene Propylene	Good	Good	Poor	Good
Hypalon	Good	Good	Poor	Fair
Fluorocarbon	Good	Good	Poor	Fair
Fluorosilicone	Fair	Fair	Fair	----
Isoprene	Good	Good	Poor	----
Natural Rubber	Good	Good	Poor	Doubtful
Neoprene (both)	Good	Fair	Poor	Good
Nitrile	Fair	Fair	Doubtful	Good
Polyacrylic	Fair	Poor	Poor	----
Polysulphide	Good	Good	Poor	Good
Polyurethane	Fair	Poor	Poor	----
Silicone	Good	Good	Poor	Poor

Compatibility is based on a sequence of: Good, Fair, Doubtful, Poor.
"—" indicates that results were inconsistent.

COMMENTS

The tests were conducted using the various elastomer samples immersed in the **Stabilant 22** concentrate, or, as in the diluted forms, one part **Stabilant 22** and four parts of the diluent (by volume). Where a diluent was used, it was present for ten percent of the initial 30 day exposure period and then the samples were transferred to a pure **Stabilant 22** bath. The tests were run after an exposure of 30 days, 90 days, 180 days, and 360 days and the listings were based on the worst-case information within these periods for the elastomer listed.

The degradation of the elastomer seemed more dependent upon the diluent used than on the **Stabilant 22** and it must be remembered that the diluent would usually evaporate within a relatively short period of time following the application of the diluted **Stabilant 22** to an actual connector, switch, or circuit board.

NATO Supplier Code 38948 - 15 mL of S22a has NATO Part # N 5999-21-900-6937

The **Stabilants** are patented in Canada - 1987; U.S. 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 material.

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