

TECH NOTE 04 - MSDS's - STABILANT 22 A [English]

Material Safety Data Sheet - Stabilant 22A (TM) - Expires 01/02/2009

Manufactured by.- D.W. ELECTROCHEMICALS LTD

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SOME FIRE HAZARD SOME HEALTH HAZARD

(WHMIS Classification B-2, D-2B)

DESIGNATION

- **Name:** Stabilant 22A - (No synonyms)
- **Product Use:** Electric Contact Enhancer
- **Family:** 80% Alcohol - 20% Polyglycol

Family Name & Identity

- 80% Isopropanol [Fire & Some Health Hazard - CAS 67-63-0]-20% Stabilant 22 -[No Fire or Health Hazard] - falls under CAS 9003-11-6 (*a Modified Polyoxypropylene-Polyoxyethylene Block Polymer of the, Polyglycol Family*)

HAZARDOUS INGREDIENTS:

- 80% Isopropanol

PHYSICAL DATA

- **Physical State:** Liquid
- **Appearance:** Thin clear liquid
- **Odor:** Sharp alcohol odor
- **Odor Threshold:** No Data
- **Melting Point:** -89° Celsius
- **Boiling Point:** 82.4° Celsius
- **Specific Gravity:** 0.838
- **Decomposition Temp:** No Tests Run

- **Solubility in water:** >500 grams/liter
- **Viscosity:** No Tests Run
- **Vapor Density:** 2.01
- **Vapor Pressure(mm):** 33 mmHg @ 20° Celsius
- **Evaporation Rate:** No Tests Run
- **Refractive Index:** No Tests Run
- **Coefficient of Water/oil distribution:** No Tests Run
- **pH:** Not Applicable
- **VOC:** 80 % (reportable)

FIRE & EXPLOSION HAZARDS

- **Upper Explosion Limit (% by Volume):** 12.0
- **Lower Explosion Limit (% by Volume):** 2.0
- **Autoignition Temperature:** 399° Celsius
- **Flash Point [Method]:** 13° Celsius [Tag C.C.]
- **Hazardous Combustion Products:** No Data
- **Extinguishing Media:** Water fog, CO₂, Foam, Dry Chemical
- **Special Procedures:** Do not use direct water stream as this could spread the fire. Self Contained Breathing Apparatus should be used when fighting a fire in a confined area or when exposed to contamination products.
- **Explosion Data - Sensitivity to impact:** No Tests Run
- **Sensitivity to Static Discharge:** No Tests Run
- **Unusual Fire & Explosion Hazards:** Improperly Disposed of Stabilant soaked combustible materials might be subject to spontaneous combustion. Heat may build internal pressure in container, leading to rupture of container.

HEALTH EFFECTS DATA

- *As the material is 80% isopropanol it exhibits all of the health hazards of isopropanol but to a lesser degree. The lower concentration of the isopropanol mitigates the defatting and drying effects of the near absolute alcohol's on the skin although there is still a hazard on eye contact. If the container of Stabilant 22A is left uncapped for extended periods at normal room temperatures, the isopropanol will evaporate reducing the hazards somewhat. When applied to contacts the isopropanol will evaporate leaving the nonvolatile portion of the material (Stabilant 22) on the surfaces, and reference should be made to the MSDS for Stabilant 22 as to the potential hazards of that product.*
- **LD₅₀ (oral, rat):** 5000 mg/kg.
- **Skin irritation:** LC₅₀ (skin, rabbit 12800 mg/Kg.) The material is a mild irritant and may cause defatting and drying of the skin.
- **Prolonged Skin Exposure:** Prolonged and repeated contact may cause dermatitis.
- **First Aid on Skin Exposure:** Major spills on clothing require removal of contaminated clothing, then flush area with running water and wash with soap and water. Small area contact, wash with running water, then soap and water. Obtain medical advice.
- **Eye irritation:** The vapor is a mild irritant which may cause conjunctivitis and corneal damage. The liquid is a severe eye irritant which may cause permanent eye damage.
- **First Aid on Eye Exposure:** Flush eyes with running water for at least 20 minutes holding eyelids open. Obtain medical attention immediately! Treat for isopropanol exposure.

- **Exposure when Inhaled: LC₅₀** (inhalation, rat , 16000ppm/8H) May cause irritation of the eyes, nose and throat and of the respiratory tract. Overexposure could cause Central Nervous System Depression characterized by headache, dizziness, drowsiness, nausea, vomiting, abdominal pain and incoordination. Severe overexposure could lead to coma and possibly death due to respiratory failure. Remove to fresh air. If not breathing give artificial respiration. Obtain medical attention immediately.
- **First Aid oral ingestion:** If victim is alert and not convulsing, rinse out mouth and give 1/2 to 1 glass of water to dilute material. DO NOT induce vomiting. If spontaneous vomiting occurs, have victim lean forward with head down to avoid breathing in of vomitus, rinse mouth and administer more water--Transport **victim to an emergency facility IMMEDIATELY!**
- **Emergency Medical Care:** Extreme care must be taken to avoid aspiration of product into lungs, which may result in pulmonary edema.
- **Exposure Limits:** No Tests Run
- **Sensitization to Material:** Limited tests indicate no sensitization effects
- **Carcinogenicity:** None Known.
- **Reproductive Effects:** No Tests Run.
- **Tetratogenicity:** No Tests Run.
- **Mutagenicity:** No Tests Run.
- **Synergistic Materials:** None Known.

REACTIVITY DATA

- **Stability under normal conditions:** Stable
- **Stability under fire conditions:** Flammable
- **Conditions to avoid:** Excessive Temperatures, sparks, open flames and all other sources of ignition.
- **Incomparability:** Strong oxidizers, also may react with aluminum at high temperatures
- **Hazardous Decomposition Products:** CO, CO₂
- **Hazardous Polymerization or Reactivity:** Avoid oxidizing materials. Can react violently with potassium oxides and potassium. Can ignite in contact with platinum black catalyst.

ECOLOGICAL DATA:

- **Biodegradability:** No Tests Run - No Data
- **Fish Toxicity:** Harmful to aquatic life at low concentrations. No quantitative data known.
- **Bacterial Inhibition in Influent:** No Data

ENGINEERING CONTROLS & SPECIAL PROTECTION INFORMATION

Note: Conditions of use, adequacy of engineering or of other control measures and actual exposure will dictate the need for specific protective devices at the workplace. The recommendations listed in this section indicate the type of equipment which will prevent overexposure to the product.

- **Ventilation:** Where the material is being applied by swab or small brush, or from a dropper bottle, it is highly unlikely that sufficient air concentration of the isopropanol could occur under normal ventilation such that a health hazard could be created. Whenever large volumes of the material are being used (>250 mL) or whenever the continually exposed surface area of the material is in excess of 3 Square ft., it is suggested that local exhaust ventilation be provided.
- **Respiratory Protection:** Where small amounts are being used with a swab or small brush, or

are being dispensed from a dropper bottle, respiratory protection is not needed under normal ventilation conditions. Where large volumes of the material (>250 mL) are being used or where large surface areas are being exposed (e.g. - dipping tanks) the use of a NIOSH/MSHA approved air purifying respirator equipped with organic vapor cartridges be used if exposed to concentrations up to 1000 ppm. Use an air supplied unit if exposed to higher or unknown concentrations. (Such as in bulk handling)

- **Protective Gloves:** Rubber, or Neoprene gloves should be worn when the handling of circuit boards or connectors requires constant skin contact with the material.
- **Eye Protection:** Goggles or Face shield when there is a potential for eye contact.
- **Footwear:** Non slip when handling bulk amounts.
- **Clothing:** Rubber or Neoprene protective clothing when handling bulk amounts
- **Other:** Not required
- **Bulk Handling:** Ground equipment to prevent static discharge accumulation Observe physical safety procedures commensurate with the size of the container involved.

SPECIAL STORAGE PRECAUTIONS

- **Storage Procedures:** Store in a cool, dry, well ventilated location away from strong oxidizers.

SPECIAL SHIPPING DESCRIPTION (Under the TDG Act)

Special Shipping Information:

- **Shipping Name:** Stabilant 22A - Isopropanol NOTE.- As 80% of material is Isopropanol, the material should be treated as Isopropanol for shipment using:
- **PIN (Product ID#) UN1219--Packing Group - II--Class 3:**

OTHER REGULATORY INFORMATION

- **United States Customs:** The quantity of materials in this product have been reviewed and are not reportable under SARA title III.

(These materials are listed on the TSCA Inventory)

OSHA (29CFR1900.1200) Classification:

Flammable Liquid, Eye Irritant

- **Canada:** These materials are listed in the Domestic Substance List under the CEPA.

NCSL not listed

- **Customs:** For tariff purposes the material is classified as Semiconductor, other. Harmonized Code # 8541.50.00.80

FIRST AID - EMERGENCY

- **Eyes:** Flush eyes with running water for at least 20 minutes holding eyelids open. Obtain medical attention immediately! Treat for isopropanol exposure.
- **Skin:** Wash with soap and water. Remove and launder contaminated clothing before re-use. Consult a physician if irritation develops at site of exposure.

- **Ingestion:** If victim is alert and not convulsing, rinse out mouth and give 1/2 to 1 glass of water to dilute material.
- **DO NOT induce vomiting!**
- If spontaneous vomiting occurs, have victim lean forward with head down to avoid breathing in of vomitus, rinse mouth and administer more water.
- *Transport victim to an emergency facility IMMEDIATELY!*
- **Inhalation:** Remove to fresh air. If not breathing give artificial respiration. Obtain medical attention immediately.

HOUSEKEEPING PROCEDURES

- **Clean-up of Leaks & Spills:** Eliminate all sources of ignition. Stop or reduce discharge if safe to do so. Prevent from entering water courses or sewers. Ventilate enclosed spaces. Contain by applying absorbent. Collect waste absorbent for disposal. For significant releases contact regulatory authorities.
- **Deactivating Chemicals:** None known.
- **Disposal of Waste:** Dispose of waste materials in an approved incinerator or waste treatment/disposal facility in accordance with applicable regulations. Do not dispose of in sewer or with normal waste.

OTHER DATA (Excluded from waiver at end of MSDS)



- **Heavy Metals:** D.W. Electrochemicals Ltd. has a policy of not allowing any intentional addition of any heavy metals, such as lead, cadmium, mercury, or hexavalent chromium, or their compounds, to be used in inks or in the labels on our packaging and requires the total concentration of these materials, if present, to be so at a level of less than 100 parts per million and we so certify.
- **RoHS Legislation Article 4(1) pertaining to Heavy Metals in Stabilants and other prohibited components:** D.W. Electrochemicals Ltd. has a policy of not allowing any addition of any heavy metals, such as lead, cadmium, mercury, or hexavalent chromium, or their compounds, to be used in the Stabilants and requires the total concentration of these materials, if present, to be so at a level of less than 100 parts per million and we so certify. Nor does Stabilant contain any polybrominated biphenyls (PBBs) or polybrominated diphenyl ethers (PBDEs) and we so certify.
- **Ozone Depleting Chemicals:** Because of our corporate opposition to the use of ODC's either in the manufacture of, or as an inclusion in any of our products, D.W. Electrochemicals Ltd. has consistently refused to provide any of our products in aerosol spray packaging and/or to supply any of our materials diluted with any Class 1 ODC, and we so certify.
- **PCB's:** We certify that this material has been subjected to tests capable of detecting PCB's to a level of less than 2 parts per million and no PCB's have been found.
- **Packaging:** New standards are in place in an attempt to reduce the amount of plastics, tape and/or adhesives used and to ensure that our packaging may be reused or recycled

MSDS PREPARATION DATA & EMERGENCY PHONE NUMBER

- **Prepared By:** Wm Wright
- **Department:** Engineering
- **Preparation Date:** January 2nd, 2006

- **Current Revision:** Revision 21a Updated, *and for inclusion on the web page*
- **Emergency Phone:** (905) 508-7500
- **Emergency Contact:** Wm Wright

Revision 21a

Patented Canada 1987, US Patent 4696832. Others Pending.

The Stabilants, and the term "Contact Enhancer" © Copyrighted 1983.

NATO/CAGE Supplier code #38948

!5 mL Stabilant 22A has NATO Stock Number 5999-21-900-6937

D.W. Electrochemicals Ltd. urges each customer or recipient of this MSDS to study it carefully to become aware of/and understand the hazards associated with the product. The reader should consider consulting reference works or individuals who are experts in ventilation, toxicology or fire prevention, as necessary or appropriate to use and understand the data contains in this MSDS.

To promote safe use and handling of this product, each customer or recipient should (1) notify employees, agents, contractors and others who may use this material, of the information in this MSDS and any other information regarding hazards or safety, (2) Furnish this same information to each customer for the product, and (3) request customers to notify their employees customers, and other users of the product of this information.

The information and recommendations contained herein are based on data believed to be correct, however no guarantee or warranty of any kind, expressed or implied, is made with respect to information and recommendations contained herein except when certified

Please refer to Technical Note 1 - MSDS for Stabilant 22

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COMPANY AND CREDO

LISTING OF MSDS's AND NOTES

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