

ORION RESEARCH INC -- D/T REF ELECTRODE INNER FILL SOLUTION -- 6630-01-348-6467

===== Product Identification =====

Product ID:D/T REF ELECTRODE INNER FILL SOLUTION

MSDS Date:02/07/1994

FSC:6630

NIIN:01-348-6467

MSDS Number: BXCCS

=== Responsible Party ===

Company Name:ORION RESEARCH INC

Address:529 MAIN STREET

City:BOSTON

State:MA

ZIP:02129

Country:US

Info Phone Num:617-242-3900/800-225-1480

Emerg

ency Phone Num:617-242-3900

CAGE:014G6

=== Contractor Identification ===

Company Name:ORION RESEARCH, INC.

Address:500 CUMMINGS CENTER

Box:City:BEVERLY

State:MA

ZIP:01915-6199

Country:US

Phone:978-232-6000

CAGE:014G6

===== Composition/Information on Ingredients =====

Ingred Name:POTASSIUM NITRATE

CAS:7757-79-1

RTECS #:TT3700000

Fraction by Wt: 17.1%

Other REC Limits:NONE RECOMMENDED

Ingred Name:SILVER CHLORIDE

CAS:7783-90-6

RTECS #:VW3563000

Fraction by Wt: TRACE

Other REC L

imits:NONE RECOMMENDED

Ingred Name:GLYCOLS, POLYETHYLENE, MONO(P-(1,1,3,3-TETRAMETHYL  
BUTYL)PHENYL) ETHER (TRITON X100)  
CAS:9002-93-1  
RTECS #:MD0907700  
Fraction by Wt: TRACE  
Other REC Limits:NONE RECOMMENDED

Ingred Name:NAPHTHOL GREEN B  
CAS:19381-50-1  
RTECS #:LJ8930000  
Fraction by Wt: 0.5%  
Other REC Limits:NONE RECOMMENDED

Ingred Name:POTASSIUM CHLORIDE  
CAS:7447-40-7  
RTECS #:TS8050000  
Fraction by Wt: 5.0%  
Other REC Limits:NONE RECOMMENDED

Ingred Name:SODIUM CHLORIDE  
CAS:7647-14-5  
RTECS  
#:VZ4725000  
Fraction by Wt: 0.4%  
Other REC Limits:NONE RECOMMENDED

Ingred Name:WATER  
CAS:7732-18-5  
RTECS #:ZC0110000  
Fraction by Wt: 77.0%  
Other REC Limits:NONE RECOMMENDED  
OSHA PEL:NOT RELEVANT  
ACGIH TLV:NOT RELEVANT

===== Hazards Identification =====

LD50 LC50 Mixture:LD50 (ORAL, RAT) IS NOT KNOWN.  
Routes of Entry: Inhalation:NO Skin:NO Ingestion:NO  
Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO  
Health Hazards Acute and Chronic:TARGET ORGANS:EYES, SK

IN, CNS. ACUTE-

EYES:MAY CAUSE IRRITATION. INHALATION:UNLIKELY IN NORMAL USE.

INGESTION:LARGE AMOUNTS TAKEN INTERNALLY CAN BE FATAL OR MAY CAUSE  
DIZZINESS, VOMITING, WEAKNESS AND COLLAPSE. SKIN:UNKNOWN. CHRONIC-  
CAN CAUSE KIDNEY DAMAGE.

Explanation of Carcinogenicity:NONE

Effects of Overexposure:IRRITATION, DIZZINESS, VOMITING, HEADACHE,  
WEAKNESS, NAUSEA

Medical Cond Aggravated by Exposure:INDIVIDUALS WITH PRE-EXISTING  
DISEASES OF THE HEART OR KIDNEYS MAY HAVE INCREASED

SUSCEPTIBILITY

TO THE TOXICITY OF EXCESSIVE EXPOSURES.

===== First Aid Measures =====

First Aid:GET MEDICAL HELP IF SYMPTOMS PERSIST. INHALED:REMOVE TO FRESH  
AIR. EYES:FLUSH WITH WATER FOR 15 MINUTES, HOLDING EYELIDS OPEN.  
SKIN:WASH WITH SOAP & WATER. ORAL:IF CONSCIOUS, INDUCE VOMITING.  
GET MEDI CAL ATTENTION.

===== Fire Fighting Measures =====

Flash Point:NONE

Extinguishing Media:WATER SPRAY, CARBON DIOX  
IDE, SAND, FOAM/DRY

CHEMICAL. WATER SPRAY MAY BE USED TO KEEP FIRE EXPOSED CONTAINERS  
COOL.

Fire Fighting Procedures:WEAR PROTECTIVE CLOTHING AND NIOSH-APPROVED  
SELF-CONTAINED BREATHING APPARATUS.

Unusual Fire/Explosion Hazard:NITRATE MAY RENDER OTHER MATERIALS MORE  
COMBUSTIBLE IF ALLOWED TO DRY OUT UPON THEM.

===== Accidental Release Measures =====

Spill Release Procedures:PREVENT SKIN AND EYE CONTACT. VENTILATE AREA.  
DILUTE SPILL WITH WATER AND

COVER WITH SODA ASH. MIX AND TRANSFER

TO A SUITABLE CONTAINER. NEUTRALIZE WITH HYDROCHLORIC ACID AND WASH  
DOWN DRAIN WITH EXCE SS WATER, IF PERMITTED.

Neutralizing Agent:SODA ASH THEN HYDROCHLORIC ACID

===== Handling and Storage =====

Handling and Storage Precautions:STORE AT ROOM TEMPERATURE. KEEP  
CONTAINER TIGHTLY CLOSED. KEEP AWAY FROM INCOMPATIBLE MATERIALS.

Other Precautions:WASH THOROUGHLY WITH SOAP AND WATER AFTER HANDLING  
AND BEFORE E

ATING, DRINKING, SMOKING. KEEP OUT OF REACH OF CHILDREN. DO NOT HEAT TO DRYNESS.

===== Exposure Controls/Personal Protection =====

Respiratory Protection:NONE NORMALLY REQUIRED.  
Ventilation:ADEQUATE  
Protective Gloves:NONE NORMALLY REQUIRED.  
Eye Protection:SAFETY GLASSES  
Other Protective Equipment:EYE WASH STATION, SAFETY SHOWER, PROTECTIVE CLOTHING  
Work Hygienic Practices:OBSERVE GOOD INDUSTRIAL HYGIENE PRACTICES AND RECOMMENDED PROCEDURES.  
Supplemental Safety and Health  
PH RANGE: 5.5 - 7.5.

===== Physical/Chemical Properties =====

HCC:N1  
NRC/State Lic Num:NOT RELEVANT  
Boiling Pt:B.P. Text:212F,100C  
Melt/Freeze Pt:M.P/F.P Text:24.8F,-4.0C  
Spec Gravity:1.0  
pH:5.5  
Solubility in Water:MISCIBLE  
Appearance and Odor:GREEN LIQUID - ODORLESS

===== Stability and Reactivity Data =====

Stability Indicator/Materials to Avoid:YES  
REDUCING AGENTS, SODIUM ACETATE, TRICHLOROETHYLENE, CHARCOAL  
Stability Condition  
to Avoid:HEATING TO DRYNESS  
Hazardous Decomposition Products:OXIDES OF NITROGEN

===== Disposal Considerations =====

Waste Disposal Methods:DISPOSE OF IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS. NEUTRALIZED SOLUTION MAY BE WASHED DOWN DRAIN WITH LARGE AMOUNT OF WATER, IF PERMITTED.

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