

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 MEDICAL 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 EXCESS 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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