

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

Emer

gency 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

Limits: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, S

KIN, 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 DIO
XIDE, 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 AN

D 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

EATING, 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.

Disclaimer (provided with this information by the compiling agencies):
This information is formulated for use by elements of the Department of Defense. T

he United States of America in no manner whatsoever, expressly or implied, warrants this information to be accurate and disclaims all liability for its use. Any person utilizing this document should seek competent professional advice to verify and assume responsibility for the suitability of this information to their particular situation.