

ORION MATERIAL SAFETY DATA SHEET

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I. PRODUCT IDENTIFICATION

PRODUCT NAME: ORION APPLICATION SOLUTION - PH ELECTRODE STORAGE SOLUTION

CATALOG NO.: 910001

EFFECTIVE DATE: 08/25/91

HAZARDOUS SHIPMENT LABELING: DOT NONE IATA NONE

PREPARED BY THOMAS FLYNN TITLE: QUALITY ASSURANCE CHEMIST

APPROVED BY LYNN ORLOWITZ TITLE: DIRECTOR REGULATORY MATTERS

II. HAZARDOUS INGREDIENTS (IDENTITY INFORMATION)

HAZARDOUS COMPONENTS* SPECIFIC CHEMICAL IDENTITY: COMMON NAME(S)	CAS NO.	%	OSHA PEL	ACGIH TLV	LD 50 MG/KG
POTASSIUM CHLORIDE (KCL)**	7447-40-7	11.1	NONE	NONE	938 (ORL-INF)
POTASSIUM PHOSPHATE MONOBASIC (KH <sub>2</sub> PO <sub>4</sub> )	7778-77-0	0.17	NONE	NONE	NA*
SODIUM PHOSPHATE DIBASIC (NA <sub>2</sub> HPO <sub>4</sub> )	7558-79-4	0.18	NONE	NONE	1,070 (IVN-RBT)
**DEIONIZED WATER (H <sub>2</sub> O)	7732-18-5	88.55	NONE	NONE	629,000 (ORL-DOG)

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III. PHYSICAL DATA

BOILING POINT 760 MM HG 100 DEGREES C

FREEZING POINT: -3 DEGREES C

SPECIFIC GRAVITY (H<sub>2</sub>O = 1): 1.05

VAPOR PRESSURE @: NA\*

PH @ 25 DEGREES C: 6.3-6.9

SOLUBILITY IN WATER, % BY WT. @: MISCIBLE

VOLATILES, % BY WT.: NA

EVAPORATION RATE (BUTYL, ACETATE = 1): NA

VAPOR DENSITY (AIR = 1): NA

APPEARANCE AND ODOR: CLEAR, COLORLESS, ODORLESS LIQUID

IV. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (TEST METHOD): NA AUTOIGNITION TEMPERATURE NA

FLAMMABLE LIMITS IN AIR, % BY VOLUME: LOWER UPPER  
NA NA

EXTINGUISHING MEDIA: ANY

SPECIAL FIRE-FIGHTING PROCEDURES: NONE, THIS SOLUTION IS NON-FLAMMABLE.

UNUSUAL FIRE AND EXPLOSION HAZARDS: NONE

V. REACTIVITY DATA

STABILITY: STABLE

CONDITIONS TO AVOID: NONE

INCOMPATIBILITY (MATERIALS TO AVOID): MAGNESIUM AND SODIUM METALS

HAZARDOUS DECOMPOSITION PRODUCTS: MAY EMIT TOXIC POX FUMES IF HEATED TO DECOMPOSITION.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

CONDITION TO AVOID: HEATING TO DECOMPOSITION

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VI. HEALTH HAZARD DATA

ROUTE(S) OF ENTRY: INHALATION? NO SKIN? NO INGESTION? NO

HEALTH HAZARDS (ACUTE AND CHRONIC)  
LOW HAZARD FOR BOTH ACUTE AND CHRONIC BECAUSE OF LOW CONCENTRATION OF PHOSPHATE SALTS. THIS COMPOSITION IS ALSO USED AS A BUFFER IN PHARMACEUTICALS.

CARCINOGENICITY:

NOT FOUND ON THESE LISTS.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: COULD AGGRAVATE DISEASES OF THE SKIN.

EMERGENCY AND FIRST PROCEDURES: WASH OFF CONTACT AREA WITH SOAP AND WATER.  
INTERNAL: DILUTE WITH WATER AND CONSULT PHYSICIAN.

VII. PRECAUTIONS (SAFE HANDLING AND USE)

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:  
CLEAN UP AND WASH DOWN DRAIN IF LOCAL LAW ALLOWS.

WASTE DISPOSAL METHOD:  
WASH DOWN DRAIN. OBSERVE ALL FEDERAL, STATE, AND LOCAL LAWS WHEN DISPOSING OF THIS PRODUCT.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:  
NFPA RATING: SCALE(0-4); HEALTH - 1, FIRE - 0, REACTIVITY - 0 SPECIFIC - NONE.

OTHER PRECAUTIONS:  
SARA TITLE III NA2HPO4 IS A CERCLA HAZARD AND RELEASES ARE SUBJECT TO SECTION 304 OF TITLE III. NOT FOUND ON CAL. PROP. 65. REPORTED IN EPA TSCA INVENTORY.

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VIII. CONTROL MEASURES

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RESPIRATORY PROTECTION (SPECIFY TYPE): NONE

VENTILATION: LOCAL EXHAUST: NONE SPECIAL: NONE  
MECHANICAL (GENERAL): NONE OTHER: NONE

PROTECTIVE GLOVES: NONE EYE PROTECTION: SAFETY GLASSES

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: EYE WASH STATION SHOULD BE AVAILABLE.

WORK/HYGIENIC PRACTICES: NO EATING OR DRINKING IN WORK AREA.

\* CHEMICALS WHICH ARE NOT CLASSIFIED AS HAZARDOUS PER U.S. OSHA GUIDELINES (29CFR PARTS 1915.2 OR 1916.2) OR THE MASSACHUSETTS SUBSTANCE LIST (105CMR670.000 APPENDIX A) WILL NOT NECESSARILY BE LISTED ON THIS FORM EVEN THOUGH ONE OR MORE MAY BE A CONSTITUENT OF THIS PRODUCT.

\*NA NOT AVAILABLE/NOT APPLICABLE

\*\* NON-HAZARDOUS COMPONENT.

LIABILITY IS EXPRESSLY DISCLAIMED FOR ANY LOSS OR INJURY ARISING OUT OF THE USE OF THIS INFORMATION OR THE USE OF ANY MATERIALS DESIGNATED. SAFE USE OF THE MATERIALS IS THE RESPONSIBILITY OF THE USER.

DOCUMENT NO. 205545-001  
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