

ATI ORION MATERIAL SAFETY DATA SHEET

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I. PRODUCT IDENTIFICATION

PRODUCT NAME: ORION APPLICATION SOLUTION (SODIUM KNOWN ADDITION STANDARD WITH I.S.A.)

CATALOG NO: 841109

EFFECTIVE DATE: 03/07/94

HAZARDOUS SHIPMENT LABELING: DOT NONE IATA NONE

PREPARED BY THOMAS F. FLYNN TITLE: QUALITY ASSURANCE CHEMIST

APPROVED BY LYNN ORLOWITZ TITLE: DIRECTOR REGULATORY MATTERS

II. HAZARDOUS INGREDIENTS (IDENTIFY INFORMATION)

HAZARDOUS COMPONENTS* SPECIFIC CHEMICAL IDENTITY: COMMON NAME(S)	CAS NO.	%	OSHA PEL	ACGIH TLV	LD LOMG/KG
AMMONIUM CHLORIDE (NH4CL)	2125-02-9	1.9	10MG/M3	10MG/M3	600 (ORL-DOG)
AMMONIUM HYDROXIDE (NH4OH)	1336-21-6	1.3	10MG/M3	10MG/M3	43 (ORL-HUMN)
**SODIUM CHLORIDE (NACL)	7647-14-5	0.3	NA	NA*	800 (ORL-RBT)
**DEIONIZED WATER (H2O)	7732-18-5	96.5	NA	NA	629,000 (ORL-DOG)

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III. PHYSICAL DATA

BOILING POINT: 750 MM HG 100 DEGREES C

FREEZING POINT: 0 DEGREES C

SPECIFIC GRAVITY (H2O=1): 1.01

VAPOR PRESSURE @: NA

PH @ 25 DEGREES C: 9.0-10.5

SOLUBILITY IN WATER, % BY WT @: MISCIBLE

VOLATILES, % BY WT.: NA

EVAPORATION RATE (BUTYL, ACETATE = 1): NA

APPEARANCE AND ODOR: CLEAR, ODORLESS LIQUID

IV. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (TEST METHOD): NA

AUTOIGNITION TEMPERATURE: NA

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

EXTINGUISHING MEDIA: ANY

SPECIAL FIRE-FIGHTING PROCEDURES: WEAR SELF-CONTAINED BREATHING APPARATUS.

UNUSUAL FIRE AND EXPLOSION HAZARDS: MAY GIVE OFF TOXIC AMMONIA FUMES DURING A FIRE.

V. REACTIVITY DATA

STABILITY: STABLE

CONDITIONS TO AVOID: HEAT OR FLAME

INCOMPATIBILITY (MATERIALS TO AVOID):
STRONG OXIZIDERS, ACIDS (HCL, HNO3) CALCIUM AND SODIUM HYPOCHLORITE BLEACHES,
HEAVY METALS (GOLD, MERCURY, SILVER).

HAZARDOUS DECOMPOSITION PRODUCTS:
MAY GIVE OFF TOXIC AMMONIA OR NITROUS OXIDE FUMES WHEN HEATED.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

CONDITION TO AVOID: NONE LISTED

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VI. HEALTH HAZARD DATA

ROUTE(S) OF ENTRY: INHALATION? YES SKIN? YES INGESTION? YES

HEALTH HAZARDS (ACUTE AND CHRONIC)
ACUTE: MAY IRRITATE EYES, SKIN OR RESPIRATORY TRACT. INTERNALLY, MAY IRRITATE
STOMACH LINING AND ESOPHAGUS. CHRONIC: IRRITATION OF EYES AND UPPER
RESPIRATORY TRACT. MAY CAUSE SEVERE BREATHING DIFFICULTIES.

CARCINOGENICITY: NOT FOUND ON THESE LISTS.

SIGNS AND SYMPTOMS OF EXPOSURE:
REDNESS OR IRRITATION OF SKIN, CONJUNCTIVITIS, COUGHING.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:
RESPIRATORY, HEART, SKIN DISEASES.

EMERGENCY AND FIRST AID PROCEDURES:
EXTERNAL: WASH AFFECTED AREA WITH WATER. EYES: IRRIGATE WITH PLENTY OF
WATER, LIFTING EYELIDS OCCASIONALLY. INTERNAL: GIVE LARGE AMOUNTS OF WATER;
DO NOT INDUCE VOMITING. INHALATION: GET FRESH AIR AND GIVE ARTIFICIAL
RESPIRATION. CONTACT PHYSICIAN IMMEDIATELY FOR INTERNAL INHALATION EXPOSURE.

VII. PRECAUTIONS (SAFE HANDLING AND USE)

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:
WEAR RUBBER GLOVES, FACE SHIELD, AND LAB COAT. DILUTE WITH WATER AND SET ASIDE

FOR WASTE DISPOSAL.

WASTE DISPOSAL METHOD:

CONSULT WITH AND OBSERVE ALL FEDERAL, STATE AND LOCAL LAWS WHEN DISPOSING OF THIS PRODUCT.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:

NOTE: AMMONIA AND AMMONIUM CHLORIDE BOTH APPEAR ON EPA LIST 302.4 OR 40 CFR AND ARE REGULATED UNDER SARA TITLE III. NFPA RATING: SCALE (0-4); HEALTH-1, FIRE-0, REACTIVITY-0, SPECIFIC-ALKALINE.

OTHER PRECAUTIONS:

KEEP WELL SEALED. ALWAYS WASH HANDS THOROUGHLY AFTER WORKING WITH THIS PRODUCT. THIS PRODUCT IS NOT AFFECTED BY CAL. PROP 65 COMPONENTS ARE REPORTED IN TSCA INVENTORY.

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VIII. CONTROL MEASURES

RESPIRATORY PROTECTION (SPECIFY TYPE):

100 PPM: CCRS; SCBA. ESCAPE: GMS; SCBA

VENTILATION: LOCAL EXHAUST: TO MEET EXPOSURE LIMITS SPECIAL: NA

VENTILATION: MECHANICAL (GENERAL): YES OTHER: NA

PROTECTIVE GLOVES: YES EYE PROTECTION: SAFETY GOGGLES

WORK/HYGIENIC PRACTICES: EMERGENCY EYE WASH SHOULD BE AVAILABLE.

* 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.

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