

ASTARIS LLC -- SODIUM HEXAMETAPHOSPHATE -- 6810-01-481-6872

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

Product ID:SODIUM HEXAMETAPHOSPHATE

MSDS Date:07/11/2000

FSC:6810

NIIN:01-481-6872

Status Code:A

MSDS Number: CLDJY

=== Responsible Party ===

Company Name:ASTARIS LLC

Address:622 EMERSON RD SUITE 500

City:SAINT LOUIS

State:MO

ZIP:63141-1160

Country:US

Info Phone Num:800-244-8169 / 909-983-0772

Emergency

Phone Num:(800)424-9300

Resp. Party Other MSDS Num.:REFERENCE NUMBER: AST 10053

Chemtrec Ind/Phone:(800)424-9300

CAGE:1RKV8

=== Contractor Identification ===

Company Name:ASTARIS LLC

Address:622 EMERSON RD SUITE 500

Box:City:SAINT LOUIS

State:MO

ZIP:63141-1160

Country:US

Phone:800-244-8169 / 909-983-0772

CAGE:1RKV8

Company Name:WALTRON LTD

Address:50 TANNERY RD

Box:70

City:WHITEHOUSE

State:NJ

ZIP:08888-0070

Country:US

Phone:908-534-5654/FAX: 908-534-5694

Contract Num:SP0450-01-M-ZB11

CAGE:71229

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

Ingred Name:SODIUM HEXAMETAPHOSPHATE

CAS:68915-31-1

RTECS #:TR4950250

= Wt:100.

OSHA PEL:15 MG/M3(T DUST)8HR

ACGIH TLV:19 MG/M3(INHAL)8HR

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

LD50 LC50 Mixture:ORAL, RAT, LD50:8,600 MG/KG

Health Hazards Acute and Chronic:NO SIGNIFICANT HAZARDS ASSOCIATED

WITH THIS MATERIAL. EYE CONTACT: NO MORE THAN SLIGHTLY IRRITATING
BASED ON TOXICITY STUDIES. THE D

RY MATERIAL MAY CAUSE FOREIGN BODY

IRRITATION ON SOME INDIVIDUALS. SKIN CONTACT: NO MORE THAN

SLIGHTLY TOXIC OR SLIGHTLY IRRITATING BASED ON TOXICITY STUDIES.

PROLONGED CONTACT WITH THE DRY MATERIAL MAY CAUSE DRYING OR

CHAPPING OF THE SKIN. INHALATION: INHALATION OF THE DUST MAY CAUSE

COUGHING AND SNEEZING. INGESTION: NOT TOXIC IF SWALLOWED BASED ON

TOXICITY STUDIES. NO SIGNIFICANT ADVERSE HEALTH EFFECTS ARE

EXPECTED IF ONLY SMALL AMOUNTS (LESS THAN A MOUTHFUL) ARE

SWALLOWED.

Effects of Overexposure:EYE CONTACT: IRRITATION. SKIN CONTACT:

IRRITATION, DRYING OR CHAPPING OF SKIN. INHALATION: COUGHING AND

SNEEZING. INGESTION: NO ADVERSE HEALTH EFFECTS EXPECTED IF ONLY

SMALL AMOUNTS (LESS THAN A MOUTHFUL) ARE SWALLOWED.

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

First Aid:IF IN EYES OR ON SKIN: IMMEDIATE FIRST AID IS NOT LIKELY TO
BE REQUIRED. HOWEVER, THIS MATERIAL CAN BE REMOVED WITH WATER.

REMOVE MATERIAL

FROM EYES, SKIN AND CLOTHING. WASH HEAVILY

CONTAMINATED CLOTHING BEFORE REUSE. IF INHALED: IMMEDIATE FIRST

AID IS NOT LIKELY TO BE REQUIRED. HOWEVER, IF SYMPTOMS OCCUR,

REMOVE TO FRESH AIR. IF SWALLOWED: IMMEDIATE FIRST AID IS NOT

LIKELY TO BE REQUIRED. A PHYSICIAN OR POISON CONTROL CENTER CAN BE

CONTACTED FOR ADVICE.

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

Flash Point:NON COMBUSTIBLE

Lower Limits:NA

Upper Limits:NA

Extinguishing Media:NA

U

Unusual Fire/Explosion Hazard:NONE KNOWN

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

Spill Release Procedures:SWEEP, SCOOP OR VACUUM AND REMOVE FOR DISPOSAL. FLUSH RESIDUAL SPILL AREA WITH WATER.

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

Handling and Storage Precautions:HANDLE IN ACCORDANCE WITH GOOD INDUSTRIAL HYGIENE AND SAFETY PRACTICES. THESE PRACTICES INCLUDE AVOIDING UNNECESSARY EXPOSURE AND REMOVAL OF MATERIAL FROM EYES, SKIN, AND CLOTHING. STORE IN A COOL, DRY PLACE TO MAINTAIN PRODUCT PERFORMANCE.

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

Respiratory Protection:AVOID BREATHING DUST. USE NIOSH/MSHA APPROVED RESPIRATORY PROTECTION EQUIPMENT WHEN AIRBORNE EXPOSURE LIMITS ARE EXCEEDED. CONSULT THE RESPIRATOR MANUFACTURER TO DETERMINE APPROPRIATE TYPE EQUIPMENT FOR A GIVEN APPLICATION. OBSERVE RESPIRATOR USE LIMITATIONS SPECIFIED BY NIOSH/MSHA OR THE MFR. RESPI

RATORY PROTECTION PROGRAMS MUST COMPLY WITH 29 CFR 1910.134.

Ventilation:PROVIDE NATURAL OR MECHANICAL VENTILATION TO CONTROL EXPOSURE LEVELS BELOW AIRBORNE EXPOSURE LIMITS. LOCAL MECHANICAL EXHAUST VENTILATION IS PREFERRED.

Protective Gloves:WEARING PROTECTIVE GLOVES IS RECOMMENDED TO MINIMIZE SKIN CONTAMINATION.

Eye Protection:EYE PROTECTION NOT REQUIRED. USE GOOD INDUSTRIAL PRACTICE TO AVOID EYE CONTACT.

Other Protective Equipment:OSHA AND ACGIH HAVE NOT ESTABLISHED EXPO

SURE LIMITS FOR THIS MATERIAL. HOWEVER, OSHA AND ACGIH HAVE ESTABLISHED LIMITS FOR PARTICULATES NOT OTHERWISE CLASSIFIED (PNOC). (SEE "TOXICOLOGICAL").

Work Hygienic Practices:USE GOOD INDUSTRIAL PRACTICE TO AVOID EYE CONTACT. MINIMIZE SKIN CONTAMINATION BY FOLLOWING GOOD INDUSTRIAL PRACTICE. WASH HANDS AND CONTAMINATED SKIN THOROUGHLY AFTER HANDLING. AVOID BREATHING DUST.

Supplemental Safety and Health

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

HCC

:N1
Melt/Freeze Pt:=628.C, #####F
Spec Gravity:POWDER:78-84 LB/FT3
pH:7.0 (AS 1% SOL)
Solubility in Water:INFINITELY SOLUBLE
Appearance and Odor:WHITE POWDER, GRANULES, OR GLASS PLATES, NO ODOR.

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

Stability Indicator/Materials to Avoid:YES
NONE KNOWN.
Stability Condition to Avoid:SOLUTIONS OF THIS PRODUCT WILL HYDROLYZE
TO FORM ORTHO PHOSPHATE AND OTHER SHORTER CHAIN PHOSPHATES.
DISSOLUTION IS IMPACTED BY TERMPERATURE A
ND PH OF THE SYSTEM.
Hazardous Decomposition Products:NONE KNOWN.
Conditions to Avoid Polymerization:WILL NOT OCCUR.

===== Toxicological Information =====

Toxicological Information:AIRBORNE EXPOSURE LIMITS: OSHA PEL: 15 MG/M3
(TOTAL DUST) 8-HR TWA; 5 MG/M3 (RESPIRABLE) 8-HR TWA. ACGIH TLV: 10
MG/M3 (INHALABLE) 8-HR TWA; 3 MG/M3 (RESPIRABLE) 8-HR TWA.
COMPONENTS REFERRED TO HEREI N MAY BE REGULATED BY SPECIFIC
CANADIAN PROVINCIAL LEGISLATION. PLEASE
REFER TO EXPOSURE LIMITS
LEGISLATED FOR THE PROVINCE IN WHICH THE SUBSTANCE WILL BE USED.
ORAL, RAT, LD50: 8,600 MG/KG; PRACTICA LLY NONTOXIC. DERMAL,
RABBIT, LD50: >7,940 MG/KG; PRACTICALLY NONTOXIC. EYE IRRITATION,
RABBIT: 1.3/110.0: SLIGHTLY IRRITATING. SKIN IRRITATION, RABBIT
(24-HR EXP): 0.0/8.0; NONIRRITATING. RATS FED TH IS MATERIAL
(CONTD. SEE "ECOLOGICAL")

===== Ecological Information =====

Ecological:ASTARIS HAS NOT CONDUCTED
ENVIRONMENTAL TOXICITY OR
BIODEGRADATION STUDIES WITH THIS PRODUCT. ASTARIS HAS NOT
CONDUCTEDR BIODEGRADATION STUDIES WITH THIS PRODUCT SINCE WHEN
DISSOLVED/HYDROLYZED IN WAT ER IT YIELDS COMPLETELY MINERALIZED
MATERIALS. (CONTD. FROM "TOXICOLOGICAL")IN THEIR DIET FOR ONE
MONTH SHOWED DECREASED GROWTH, INCREASED KIDNEY, LUNG, AND SPLEEN
WEIGHT, AND KIDNEY DAMAGE. RATS FED THIS MATERIAL FOR TWO YEARS
ALSO SHOWED DECREASED WEIGHT GAIN, INCREASED KIDNEY WEIGHT, AND

KIDNEY CHANGES. NO INCREASE IN TUMORS WAS REPORTED. NO ADVERSE EFFECTS IN REPRODUCTIVE (CONTD. SEE "TRANSPORT")

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

Waste Disposal Methods: THIS MATERIAL WHEN DISCARDED IS NOT A HAZARDOUS WASTE AS THAT TERM IS DEFINED BY THE RESOURCE CONSERVATION AND RECOVERY ACT (RCRA), 40 CFR 261. DRY MATERIAL MAY BE LANDFILLED OR RECYCLED IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS. CONSULT YOUR ATTORNEY OR APPROPRIATE REGULATORY OFFICIALS FOR INFORMATION ON SUCH DISPOSAL.

===== MSDS Transport Information =====

Transport Information: THE DATA PROVIDED IN THIS SECTION IS FOR INFORMATION ONLY. PLEASE APPLY THE APPROPRIATE REGULATIONS TO PROPERLY CLASSIFY YOUR SHIPMENT FOR TRANSPORTATION. U.S. DOT: NOT REGULATED FOR TRANSPORTATION. CANADIAN TDG: NOT REGULATED FOR TRANSPORTATION. (CONTD. FROM "ECOLOGICAL") CAPACITY WERE REPORTED IN A MULTIGENERATION STUDY USING RATS FED THIS MATERIAL.

===== Regulatory Information =====

SARA Title III Information: SARA HAZARD NOTIFICATION: HAZARD CATEGORIES UNDER TITLE III RULES (40 CFR 370): NOT APPLICABLE. SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES: NOT APPLICABLE. SECTION 313 TOXIC CHEMICALS: NOT APPLICABLE. CERCLA REPORTABLE QUANTITY: NOT APPLICABLE.

Federal Regulatory Information: TSCA INVENTORY: LISTED. DSL INVENTORY: LISTED.

===== Other Information =====

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

f this information to their
particular situation.