

**International
Bio-
Analytical
Industries,
Inc.**

A Global Energy Research & Resource Company



**Call
us
at
561-
826-
0061**

or

**Fax
561-
892-
8450**

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**INTERNATIONAL BIO-ANALYTICAL INDUSTRIES, INC.
MATERIAL SAFETY DATA SHEET**

Date Printed: 12/14/2011

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Version 1.2

Section 1 - Product and Company Information

Product Name URANYL NITRATE HEXAHYDRATE, ACS

Product Number 94270

Brand IBI

Company International Bio-Analytical Industries, Inc.

Street Address 3495 North Dixie Hwy. Unit # 8

City, State, Zip, Country Boca Raton, Florida 33431 USA

Technical Phone: 561-826-0061

Emergency Phone: CHEMTREC 800-424-9300

Fax: 561-892-8450

Section 2 - Composition/Information on Ingredient

Substance Name SARA 313

URANYL NITRATE CAS #13520-83-7

Formula N₂O₈U·6H₂O

Chemical Family Radioactive material.

Synonyms Dinitratodioxouranium hexahydrate * Uranium,

bis(nitrato-O)dioxo-, hexahydrate (T-4)- (9CI) *

Uranium, dinitratodioxo-, hexahydrate * Uranyl

dinitrate hexahydrate * Uranyl nitrate hexahydrate

RTECS Number: YR3850000

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Oxidizing. Highly Toxic (USA) Very Toxic (EU).

Contact with combustible material may cause fire. Very toxic if swallowed.

Irritating to respiratory system and skin. Limited evidence of a carcinogenic effect.

Risk of serious damage to eyes.

Calif. Prop. 65 carcinogen. Target organ(s): Kidneys. Liver.

For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

ORAL EXPOSURE

If swallowed, wash out mouth with water provided person is conscious. Call a physician.

INHALATION EXPOSURE

If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.

DERMAL EXPOSURE

In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes.

Call a physician.

EYE EXPOSURE

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

Section 5 - Fire Fighting Measures

FLASH POINT N/A

AUTOIGNITION TEMP N/A

FLAMMABILITY N/A

EXTINGUISHING MEDIA: Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

FIRE FIGHTING: Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Specific Hazard(s): Contact with other material may cause fire.

Emits toxic fumes under fire conditions.

Section 6 - Accidental Release Measures

PROCEDURE TO BE FOLLOWED IN CASE OF LEAK OR SPILL

Evacuate area. Handle as a radioactive spill.

PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

METHODS FOR CLEANING UP

Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

HANDLING

User Exposure: Do not breathe dust. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure.

STORAGE

Suitable: Keep tightly closed. Store in a cool dry place.

Section 8 - Exposure Controls / PPE

ENGINEERING CONTROLS

Use only in a chemical fume hood. Safety shower and eye bath.

PERSONAL PROTECTIVE EQUIPMENT

Other: Wear appropriate government approved respirator, chemical-resistant gloves, safety goggles, other protective clothing.

GENERAL HYGIENE MEASURES

Wash thoroughly after handling.

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EXPOSURE LIMITS, RTECS

Country Source Type Value

USA MSHA Standard-air TWA 0.2 MG(U)/M3

USA OSHA. PEL 8H TWA 0.05 MG(U)/M3

Section 9 - Physical/Chemical Properties

Appearance Form: Crystals

Property Value At Temperature or Pressure

Molecular Weight 502.1 AMU

pH N/A

BP/BP Range N/A

MP/MP Range N/A

Freezing Point N/A

Vapor Pressure N/A

Vapor Density N/A

Saturated Vapor Conc. N/A

Bulk Density N/A

Odor Threshold N/A

Volatile% N/A

VOC Content N/A

Water Content N/A

Solvent Content N/A

Evaporation Rate N/A

Viscosity N/A
Surface Tension N/A
Partition Coefficient N/A
Decomposition Temp. N/A
Flash Point N/A
Explosion Limits N/A
Flammability N/A
Autoignition Temp N/A
Refractive Index N/A
Optical Rotation N/A
Miscellaneous Data N/A
Solubility N/A
N/A = not available

Section 10 - Stability and Reactivity

STABILITY

Stable: Stable.

HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Nitrogen oxides, Uranium oxides.

HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur.

Section 11 - Toxicological Information

ROUTE OF EXPOSURE

Skin Contact: Causes skin irritation.

Skin Absorption: May be harmful if absorbed through the skin.

Eye Contact: Causes severe eye irritation.

Inhalation: Material is irritating to mucous membranes and upper respiratory tract. May be harmful if inhaled.

Ingestion: May be fatal if swallowed.

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TARGET ORGAN(S) OR SYSTEM(S)

Kidneys. Liver. Lungs. Brain. Damage to the kidneys. Damage to the liver. Damage to the lungs.

SIGNS AND SYMPTOMS OF EXPOSURE

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Exposure can cause: Damage to the kidneys. Damage to the liver.

Damage to the lungs. Blood effects. Symptoms may be delayed.

TOXICITY DATA

Intraperitoneal

Rat:135 MG/KG

LD50: Subcutaneous Chicken299 MG/KG

LD50

Remarks: Lungs, Thorax, or Respiration:Structural or functional change in trachea or bronchi. Liver:Other changes. Kidney, Ureter, Bladder:Other changes.

CHRONIC EXPOSURE - CARCINOGEN

Result: Contains a radioactive isotope which may produce cancer and genetic mutation.

CHRONIC EXPOSURE - MUTAGEN

Species: Hamster

Dose: 180 MG/L

Cell Type: lung

Mutation test: Cytogenetic analysis

Section 12 - Ecological Information

No data available.

Section 13 - Disposal Considerations

APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION

Dispose of spilled material as radioactive waste. Consult local, state, and federal regulations on the disposal of radioactive waste. Observe all federal, state, and local environmental regulations.

Section 14 - Transport Information

IATA

Proper Shipping Name: Nitrates, inorganic, n.o.s.

IATA UN Number: 1477

Hazard Class: 5.1

Packing Group: II

Section 15 - Regulatory Information

EU ADDITIONAL CLASSIFICATION

Symbol of Danger: T+ R N

Indication of Danger: Very toxic. Radioactive. Dangerous for the environment.

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R: 26/28 33 51/53

Risk Statements: Very toxic by inhalation and if swallowed.

Danger of cumulative effects. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S: 20/21 45 61

Safety Statements: When using do not eat, drink, or smoke. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Avoid release to the environment. Refer to special instructions/safety data sheets.

US CLASSIFICATION AND LABEL TEXT

Indication of Danger: Oxidizing, Highly Toxic (USA) Very Toxic (EU).

Risk Statements: Contact with combustible material may cause fire. Very toxic if swallowed. Irritating to respiratory system and skin. Limited evidence of a carcinogenic effect. Risk of serious damage to eyes.

Safety Statements: Keep away from combustible material. Do not breathe dust. Wear suitable protective clothing, gloves, and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

US Statements: Calif. Prop. 65 carcinogen. Target organ(s): Kidneys. Liver.

UNITED STATES REGULATORY INFORMATION

SARA LISTED: No

UNITED STATES - STATE REGULATORY INFORMATION

CALIFORNIA PROP - 65

California Prop - 65: California Proposition 65: This product is or contains chemical(s) known to the state of California to cause cancer. California Proposition 65: This product is or contains chemical(s) known to the state of California to cause cancer.

CANADA REGULATORY INFORMATION

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

DSL: No

NDSL: No

Section 16 - Other Information

DISCLAIMER

For R&D use only. Not for drug, household or other uses.

WARRANTY

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide.

IBI., shall not be held liable for any damage resulting from handling or from contact with the above product.

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