Alpha Chemika
ISO 9001 QUALITY SYSTEM CERTIFIED ORGANIZATION
MATERIAL SAFETY DATA SHEET
MSDS
Savgan Heights ; 102 ,B Wing ; R.T.O. Lane ,Andheri (West) Mumbai - 400053 , INDIA

## Section 1 - Chemical Product and Company Identification

# Product Name : URANYL ACETATE

**Synonyms:** Bis(aceto)dioxouranium dihydrate ,Bis(aceto-O)dioxouranium dihydrate ,Uranium, bis(aceto-O)dioxo-, dihydrate (9CI) , Uranyl acetate dihydrate
**CAS No.:** 6159-44-0
**Molecular Weight:** 424.15
**Chemical Formula:** $C_4H_6O_6U.2H_2O$

## Section 2 - Composition, Information on Ingredients

| Ingredient | CAS No | Percent | Hazardous |
|---|---|---|---|
| Uranyl Acetate | 6159-44-0 | 98-100% | Yes |

## Section 3 - Hazardous Identification

SPECIAL INDICATION OF HAZARDS TO HUMANS AND THE ENVIRONMENT
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.

## Section 4 - First Aid Measures

AFTER INHALATION
If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.
AFTER SKIN CONTACT
In case of contact, immediately wash skin with soap and copious amounts of water.

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

## Section 5 - Fire Fighting Measures

EXTINGUISHING MEDIA
Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.
SPECIAL RISKS
Specific Hazard(s): Emits toxic fumes under fire conditions.
SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS
Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

## Section 6 - Accidental Release Measures

EXTINGUISHING MEDIA
Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.
SPECIAL RISKS
Specific Hazard(s): Emits toxic fumes under fire conditions.
SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS
Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

## Section 7 - Handling and Storage

HANDLING
Directions for Safe Handling: Avoid inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.
STORAGE
Conditions of Storage: Keep tightly closed.

## Section 8 - Exposure Controls, Personal Protection

ENGINEERING CONTROLS
Safety shower and eye bath. Use only in a chemical fume hood.
WORK PRACTICES
Use with adequate ventilation.
GENERAL HYGIENE MEASURES
Wash thoroughly after handling.
EXPOSURE LIMITS - DENMARK
Source Type Value
OEL TWA 0.2 mg/m3
EXPOSURE LIMITS - UNITED KINGDOM
Source Type Value
OEL TWA 0.2MG(U(/M3
OEL STEL 0.6 mg(U)/m3

## Section 11 - Toxicological Information

RTECS NUMBER: YR3600000
ACUTE TOXICITY
LD50
Oral
Rat
204 mg/kg
Remarks: Nutritional and Gross Metabolic:Changes in:Body temperature decrease. Behavioral:Tremor. Skin and Appendages: Other: Hair.
LD50
Subcutaneous
Rat
8300 UG/KG
Remarks: Behavioral:Tremor. Nutritional and Gross Metabolic:Changes in:Body temperature decrease. Skin and Appendages: Other: Hair.
LD50
Oral
Mouse
242 mg/kg
Remarks: Behavioral:Tremor. Skin and Appendages: Other: Hair. Nutritional and Gross Metabolic:Changes in:Body temperature decrease.
LD50
Subcutaneous
Mouse
20400 UG/KG
Remarks: Behavioral:Tremor. Skin and Appendages: Other: Hair. Nutritional and Gross Metabolic:Changes in:Body temperature decrease.
SIGNS AND SYMPTOMS OF EXPOSURE
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Symptoms may be delayed. Blood effects. Conjunctivitis. Exposure may cause:
ROUTE OF EXPOSURE
Skin Contact: May cause skin irritation.
Skin Absorption: May be harmful if absorbed through the skin.
Eye Contact: May cause eye irritation.
Inhalation: Material may be irritating to mucous membranes and upper respiratory tract. May be fatal if inhaled.
Ingestion: May be fatal if swallowed.
TARGET ORGAN INFORMATION
Kidneys. Lungs. Liver.
CHRONIC EXPOSURE - CARCINOGEN
Result: Contains a radioactive isotope which may produce cancer and genetic mutation.
CHRONIC EXPOSURE - TERATOGEN
Species: Rat
Dose: 50 MG/KG
Route of Application: Oral
Exposure Time: (6-15D PREG)
Result: Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus). Specific Developmental Abnormalities: Musculoskeletal system.

PERSONAL PROTECTIVE EQUIPMENT
Respiratory Protection: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator.
Hand Protection: Compatible chemical-resistant gloves.
Eye Protection: Chemical safety goggles

## Section 9 - Physical and Chemical Properties

Appearance Physical State: Solid
Color: Yellow
Form: Fine crystals
Property Value At Temperature or Pressure
pH N/A
BP/BP Range N/A
MP/MP Range 110 °C
Flash Point N/A
Flammability N/A
Autoignition Temp N/A
Oxidizing Properties N/A
Explosive Properties N/A
Explosion Limits N/A
Vapor Pressure N/A
SG/Density 2.89 g/cm3
Partition Coefficient N/A
Viscosity N/A
Vapor Density N/A
Saturated Vapor Conc. N/A
Evaporation Rate N/A
Bulk Density N/A
Decomposition Temp. 275 °C
Solvent Content N/A
Water Content N/A
Surface Tension N/A
Conductivity N/A
Miscellaneous Data N/A
Solubility Solubility in Water:10% in H2O, 20°C
Other Solvents: WATER/ACETIC ACID - SOLUBLE
ETHANOL - SLIGHT

## Section 10 - Stability and Reactivity

STABILITY
Stable: Stable.
Materials to Avoid: Strong oxidizing agents.
HAZARDOUS DECOMPOSITION PRODUCTS
Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide, Uranium oxides.
HAZARDOUS POLYMERIZATION
Hazardous Polymerization: Will not occur

Species: Rat
Dose: 100 MG/KG
Route of Application: Oral
Exposure Time: (6-15D PREG)
Result: Specific Developmental Abnormalities: Craniofacial (including nose and tongue).
CHRONIC EXPOSURE - REPRODUCTIVE HAZARD
Species: Mouse
Dose: 2 GM/KG
Route of Application: Oral
Exposure Time: (60D MALE/2W PRE/1-13D PREG)
Result: Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants). Effects on Embryo or Fetus: Fetal death.
Species: Mouse
Dose: 990 MG/KG
Route of Application: Oral
Exposure Time: (60D MALE/14D PRE-4D POST)
Result: Effects on Newborn: Growth statistics (e.g., reduced weight gain). Effects on Newborn: Other postnatal measures or effects.
Species: Mouse
Dose: 640 MG/KG
Route of Application: Oral
Exposure Time: (64D MALE)
Result: Effects on Fertility: Male fertility index (e.g., # males impregnating females per # males exposed to fertile nonpregnant females).
Species: Mouse
Dose: 1280 MG/KG
Route of Application: Oral
Exposure Time: (64D MALE)
Result: Paternal Effects: Testes, epididymis, sperm duct.
Species: Mouse
Dose: 1500 MG/KG
Route of Application: Oral
Exposure Time: (13-21D PREG/21D POST)
Result: Effects on Newborn: Weaning or lactation index (e.g., # alive at weaning per # alive at day 4). Maternal Effects: Other effects. Effects on Newborn: Other postnatal measures or effects.
Species: Mouse
Dose: 4 MG/KG
Route of Application: Subcutaneous
Exposure Time: (10D PREG)
Result: Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants). Effects on Embryo or Fetus: Fetal death. Specific Developmental Abnormalities: Musculoskeletal system.
Species: Mouse
Dose: 5 MG/KG
Route of Application: Subcutaneous
Exposure Time: (6-15D PREG)
Result: Maternal Effects: Other effects. Effects on Fertility: Pre-implantation mortality (e.g., reduction in number of implants per female; total number of implants per corpora lutea). Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants).

## Section 12 - Ecological Information

No data available.

## Section 13 - Disposal Considerations

SUBSTANCE DISPOSAL
Dispose of spilled material as radioactive waste. Consult local, state, and federal regulations on the disposal of radioactive waste.

## Section 14 - Transport Information

RID/ADR
UN#: 2910
Class: 7
Proper Shipping Name: Radioactive material, excepted package, limited quantity of material
IMDG
UN#: 2910
Class: 7
Proper Shipping Name: RADIOACTIVE MATERIAL, EXCEPTED PACKAGE - LIMITED QUANTITY OF MATERIAL
Marine Pollutant: No
Severe Marine Pollutant: No
IATA
UN#: 2910
Class: 7
Proper Shipping Name: Radioactive material, excepted package, limited quantity of material
Inhalation Packing Group I: No

## Section 15 - Regulatory Information

CLASSIFICATION AND LABELING ACCORDING TO EU DIRECTIVES
ANNEX I INDEX NUMBER: 092-002-00-3
INDICATION OF DANGER: R-T+-N
Radioactive. Very toxic. Dangerous for the environment.
R-PHRASES: 26/28-33-51/53
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-PHRASES: 20/21-45-61
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.
COUNTRY SPECIFIC INFORMATION
Germany
WGK: 3
ID-Number: 1023
KBwS-Decision

## Section 16 - Additional Information

**Not Regulated**