

SPI Supplies Division

Structure Probe, Inc.

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Manufacturer's CAGE: 1P573

Material Safety Data Sheet

Date Effective: May 1, 2012

SPI #'s 02415-AB, 02416-AB, 02417-AB

SPI-Chem™ Uranyl Zinc Acetate CAS#10138-94-0
(Depleted Uranium)

Section 1: Identification

Chemical family.....Uranyl zinc acetate, Zinc bis(acetato-O)dioxouranate, Zinc uranyl acetate

Emergencies

Contacting CHEMTREC:

24 Hour Emergency Use Only #'s...

Worldwide phone: 1-(703)-527-3887

Worldwide FAX: 1-(703)-741-6090

Toll-free phone: 1-(800)-424-9300 USA only

Product or Trade Name.....Uranyl Zinc Acetate

CAS #'s.....10138-94-0 (Depleted Uranium)

Chemical Formula..... $ZnUO_4(CH_3COO)_2$

Hazardous Material Information System USA

Health.....3

Fire Hazard.....0

Reactivity.....0

Personal Protection.....0

NFPA Rating (estimated)

Health.....3

Flammability.....0

Reactivity.....0

Section 2: Composition

Molecular formula: $ZnUO_4(CH_3COO)_2$ ~100%

CAS No: 10138-94-0

EINECS No: 233-390-8

Section 3: Hazard Identification

Emergency overview:

Highly toxic (USA). Very Toxic (EU). Dangerous for 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. Radioactive material.

Target Organs: Liver, Kidneys

Potential Health Effects

Eye: Absorption of soluble uranium compounds thorough eye tissue is reported.

Skin: No information found.

Ingestion: Toxic by ingestion

Inhalation: Moderate hazard on inhalation. Coughing, sneezing & breathing difficulty may occur.

Chronic: Damage to Kidneys & Liver may occur after continued exposure.

Section 4: First Aid Measures

Eyes: In case of eye contact, flush eyes with large amounts of water for at least 15 minutes, occasionally lifting upper and lower eyelids.

Skin: In case of skin contact, wash immediately with plenty of soap and water.

Ingestion: If person is conscious, wash out mouth with water. Seek medical attention.

Inhalation: If inhaled, remove to fresh air. If breathing becomes difficult, seek medical attention.

Section 5: Fire Fighting Measures

General Information: Emits toxic fumes under fire conditions. As in any fire, wear self-contained breathing apparatus pressure-demand (MSHA/NIOSH approved or equivalent) and full protective gear.

Extinguishing Media: Water spray, carbon dioxide, dry chemical powder, or appropriate foam.

Section 6: Accidental Release Measures

General Information: Handle as a radioactive spill.

Spills/Leaks: Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves. 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: Avoid inhalation and contact with eyes, skin and clothing. Avoid prolonged or repeated exposure.

Storage: Store in cool, dry place in tightly closed container.

Section 8: Exposure Controls and Personal Protection

Engineering Controls: Safety shower and eye bath must be readily available. Use only in a chemical fume hood. Use with adequate ventilation.

Personal Protective Equipment

Eyes: Chemical safety goggles

Skin: Use chemical resistant gloves.

Clothing: Protective clothing such as long sleeves or a lab coat should be worn.

Respirators: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

Section 9: Physical and Chemical Properties

Physical Data

Physical State: solid

Appearance: yellow crystalline solid

Odor: slight odor of vinegar

pH: n/a

Melting point: n/a

Boiling point: n/a

Vapor density: n/a

Vapor pressure: n/a

Density (g cm⁻³): n/a

Flash point: n/a

Explosion limits: n/a

Autoignition temperature: n/a

Water solubility: soluble

Molecular Formula: $ZnUO_4(CH_3COO)_2$

Molecular Weight: 485.497

Section 10: Stability and Reactivity

Chemical Stability: Stable

Conditions to Avoid: Protect from moisture.

Incompatibility with Other Materials: Oxidizing agents

Hazardous Decomposition of Products: Carbon monoxide, Carbon dioxide, Uranium oxides, Zinc/Zinc oxides

Hazardous Polymerization: Will not occur.

Section 11: Toxicological Information

Very toxic if swallowed or inhaled. Danger of cumulative effects - possible carcinogen, mutagen or teratogen. (Unenriched uranium compounds, while radioactive, typically have low radioactivity, so their toxicity is determined principally by their chemical nature.)

Toxicity data

n/a

Risk phrases

R26 Very toxic by inhalation

R28 Very toxic if swallowed

R33 Danger of cumulative effects

Section 12: Ecological Information

No data available

Section 13: Disposal Considerations

Contact a licensed professional waste disposal service to dispose of this material. Dispose of spilled material as radioactive waste. Consult local, state and federal regulation on the disposal of radioactive waste. Observe all federal, state, and local regulations.

Section 14: Transport Information

UN #: 2910

Hazard Class: 7

Packing Group: none

Section 15: Regulatory Information

United States: Indication of Danger: Highly Toxic (USA) Very Toxic (EU)

TSCA: This material is listed on the TSCA inventory

Health & Safety Reporting List: n/a

Chemical Test Rules: n/a

Section 12b: n/a

TSCA Significant New Use Rule: n/a

SARA: Not listed

OSHA:

State (Individual states in the USA) Not listed under individual state lists.

California Prop. 65: This material is considered a carcinogen under California Prop. 65.

European/International Regulations: European Labeling in Accordance with EC Directives

Hazard Symbols: R – T+ - N

Risk Phrases:

R26 Very toxic by inhalation

R28 Very toxic if swallowed

R33 Danger of cumulative effects

R51 Toxic to aquatic organisms

R53 May cause long-term adverse effects in the aquatic environment

Safety Phrases:

S20 When using do not smoke

S21 Do not breathe dust

S45 In case of accident or if you feel unwell, seek medical advice immediately
(show the label where possible)

S61 Avoid release to the environment. Refer to special instructions/Safety data sheets.

Canada 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.

WHMIS This material has a WHMIS classification of D2A.

DSL/NDSL

DSL: no

NDSL: yes

Section 16: Other Information

Disclaimer of Liability:

Caution! Do not use SPI Supplies products or materials in applications involving implantation within the body; direct or indirect contact with the blood pathway; contact with bone, tissue, tissue fluid, or blood; or prolonged contact with mucous membranes. Products offered by SPI Supplies are not designed or manufactured for use in implantation in the human body or in contact with internal body fluids or tissues. SPI Supplies will not provide to customers making devices for such applications any notice, certification, or information necessary for such medical device use required by US FDA (Food and Drug Administration) regulation or any other statute. SPI Supplies and Structure Probe, Inc. make no representation, promise, express warranty or implied warranty concerning the suitability of these materials for use in implantation in the human body or in contact with internal body tissues of fluids.

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