

# SAFETY DATA SHEET

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## SECTION 1. IDENTIFICATION

**Product Name:** Zirconium(IV) Iodide

**CAS #:** 13986-26-0

**Relevant identified uses of the substance:** Scientific research and development

**Supplier details:**

Stanford Advanced Materials

E-mail: [sales@samaterials.com](mailto:sales@samaterials.com)

Tel: (949) 407-8904

Address: 23661 Birtcher Dr., Lake Forest, CA 92630 U.S.A.

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## SECTION 2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR

1910.1200)

Label Elements

Signal Word

Danger

Hazard Statements

Causes severe skin burns and eye damage

May cause respiratory irritation

Precautionary Statements

## Prevention

Do not breathe dust/fume/gas/mist/vapors/spray

Wash face, hands and any exposed skin thoroughly after handling

Wear protective gloves/protective clothing/eye protection/face protection

Use only outdoors or in a well-ventilated area

Response Immediately call a POISON CENTER or doctor/physician

## Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

## Skin

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower

Wash contaminated clothing before reuse

## Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

## Ingestion

IF SWALLOWED: Rinse mouth. DO NOT induce vomiting

## Storage

Store locked up

Store in a well-ventilated place. Keep container tightly closed

## Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

None identified

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## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component - Zirconium iodide (ZrI<sub>4</sub>)

CAS-No - 13986-26-0

Weight % - ≤100

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## SECTION 4. FIRST AID MEASURES

General Advice Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required. Keep eye wide open while rinsing.

Skin Contact Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Call a physician immediately.

Inhalation Remove to fresh air. If not breathing, give artificial respiration. Call a physician or poison control center immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

Ingestion Immediate medical attention is required. Do NOT induce vomiting. Drink plenty of water. Never give anything by mouth to an unconscious person.

Most important symptoms and effects

Causes burns by all exposure routes. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation

Notes to Physician Treat symptomatically

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## SECTION 5. FIREFIGHTING MEASURES

Suitable Extinguishing Media CO<sub>2</sub>, dry chemical, dry sand, alcohol-resistant foam. Unsuitable Extinguishing Media No information available

Flash Point No information available

Method - No information available

Autoignition Temperature No information available

Explosion Limits

Upper No data available

Lower No data available

Sensitivity to Mechanical Impact No information available

Sensitivity to Static Discharge No information available

Specific Hazards Arising from the Chemical

The product causes burns of eyes, skin and mucous membranes.

Hazardous Combustion Products

None known.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or

equivalent) and full

protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

NFPA

Health - 3

Flammability - 0

Instability - 0

Physical hazards -

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## **SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal Precautions Use personal protective equipment as required. Evacuate personnel to safe areas. Avoid

contact with skin, eyes or clothing.

Environmental Precautions Should not be released into the environment. Do not allow material to contaminate ground

water system. See Section 12 for additional Ecological Information.

Methods for Containment and Clean Up

Sweep up and shovel into suitable containers for disposal. Avoid dust formation.

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## **SECTION 7. HANDLING AND STORAGE**

**Handling** Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Use only under a chemical fume hood. Do not breathe dust. Do not ingest. If swallowed then seek immediate medical assistance.

**Storage** Protect from moisture. Corrosives area. Keep containers tightly closed in a dry, cool and well-ventilated place.

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## **SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Exposure Guidelines**

**Engineering Measures** None under normal use conditions. Ensure that eyewash stations and safety showers are close to the workstation location.

**Personal Protective Equipment**

**Eye/face Protection** Wear appropriate protective eyeglasses or chemical safety goggles as described by

OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin and body protection** Wear appropriate protective gloves and clothing to prevent skin exposure.

**Respiratory Protection** No protective equipment is needed under normal use conditions.

**Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice.

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## **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

**Physical State** Solid

**Appearance** Yellow

**Odor** No information available

Odor Threshold No information available

pH No information available

Melting Point/Range 499 °C / 930.2 °F

Boiling Point/Range 431 °C / 807.8 °F

Flash Point No information available

Evaporation Rate Not applicable

Flammability (solid,gas) No information available

Flammability or explosive limits

Upper No data available

Lower No data available

Vapor Pressure No information available

Vapor Density Not applicable

Specific Gravity No information available

Solubility No information available

Partition coefficient; n-octanol/water No data available

Autoignition Temperature No information available

Decomposition Temperature No information available

Viscosity Not applicable

Molecular Formula I4 Zr

Molecular Weight 598.84

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## **SECTION 10. STABILITY AND REACTIVITY**

Reactive Hazard None known, based on information available

Stability Moisture sensitive.

Conditions to Avoid Incompatible products.

Incompatible Materials Strong oxidizing agents

Hazardous Decomposition Products None under normal use conditions

Hazardous Polymerization Hazardous polymerization does not occur.

Hazardous Reactions None under normal processing.

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## SECTION 11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Product Information

Component Information

Toxicologically Synergistic Products

No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation No information available

Sensitization No information available

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Mutagenic Effects No information available

Reproductive Effects No information available.

Developmental Effects No information available.

Teratogenicity No information available.

STOT - single exposure Respiratory system

STOT - repeated exposure None known

Aspiration hazard No information available

Symptoms / effects, both acute and delayed

Product is a corrosive material. Use of gastric lavage or emesis is contraindicated.

Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation

Endocrine Disruptor Information No information available

Other Adverse Effects The toxicological properties have not been fully investigated.

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## SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Do not empty into drains.

Persistence and Degradability Soluble in water Persistence is unlikely based on information available.

Bioaccumulation/ Accumulation No information available.

Mobility Will likely be mobile in the environment due to its water solubility.

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## **SECTION 13. DISPOSAL CONSIDERATIONS**

Waste Disposal Methods Chemical waste generators must determine whether a discarded chemical is

classified as a

hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

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## **SECTION 14. TRANSPORT INFORMATION**

DOT

UN-No UN3260

Proper Shipping Name Corrosive solid, acidic, inorganic, n.o.s.

Technical Name (Zirconium (IV) iodide)

Hazard Class 8

Packing Group III

TDG

UN-No UN3260

Proper Shipping Name Corrosive solid, acidic, inorganic, n.o.s.

Hazard Class 8

Packing Group III IATA

UN-No UN3260

Proper Shipping Name Corrosive solid, acidic, inorganic, n.o.s.

Hazard Class 8



Packing Group III

IMDG/IMO

UN-No UN3260

Proper Shipping Name Corrosive solid, acidic, inorganic, n.o.s.

Hazard Class 8

Packing Group III

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## **SECTION 15. REGULATORY INFORMATION**

TSCA 12(b) - Notices of Export Not applicable

U.S. Federal Regulations

SARA 313 Not applicable

SARA 311/312 Hazard Categories See section 2 for more information

CWA (Clean Water Act) Not applicable

Clean Air Act Not applicable

OSHA - Occupational Safety and

Health Administration

Not applicable

CERCLA Not applicable

California Proposition 65 This product does not contain any Proposition 65 chemicals.

U.S. Department of Transportation

Reportable Quantity (RQ): N

DOT Marine Pollutant N

DOT Severe Marine Pollutant N

U.S. Department of Homeland

Security

This product does not contain any DHS chemicals.

Other International Regulations

Mexico - Grade No information available

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## **SECTION 16. OTHER INFORMATION**

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH). The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.