



Safety Data Sheet

Skyspring Nanomaterials, Inc.

www.ssnano.com

Revision Date: 02/01/2016

1 Identification of substance:

Product details:

Product name: Tantalum Nanopowder

Stock number: 1110XH

Manufacturer/Supplier:

Skyspring Nanomaterials, Inc.

2935 Westhollow Dr., Houston, TX 77082, USA

Phone: 281-870-1700, Fax: 281-870-8002, Email: sales@ssnano.com

2 Composition/Data on components:

Chemical characterization:

Description: (CAS#)

Tantalum (CAS# 7440-25-7), 100%

Identification number(s): n/a

EINECS Number: n/a

3 Hazards identification

Emergency Overview

OSHA Hazards

Flammable solid, Irritant

GHS Label elements, including precautionary statements

Pictogram



Signal word Warning

Hazard statement(s)

H228 Flammable solid.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

Precautionary statement(s)

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

HMIS Classification

Health hazard: 2

Flammability: 0

Physical hazards: 3

NFPA Rating

Health hazard: 2

Fire: 0

Reactivity Hazard: 3

Potential Health Effects

Inhalation May be harmful if inhaled. Causes respiratory tract irritation.

Skin May be harmful if absorbed through skin. Causes skin irritation.

Eyes Causes eye irritation.

Ingestion May be harmful if swallowed.

4 First aid measures**General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5 Fire fighting measures**Suitable extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

Further information

Use water spray to cool unopened containers.

6 Accidental release measures**Personal precautions**

Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Avoid breathing dust.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods and materials for containment and cleaning up

Sweep up and shovel. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal. Contain spillage, pick up with an electrically protected vacuum cleaner or by wet-brushing and transfer to a container for disposal according to local regulations (see section 13).

7 Handling and storage**Precautions for safe handling**

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition – No smoking. Take measures to prevent the build up of electrostatic charge.

Conditions for safe storage

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

Keep in a dry place.

8 Exposure controls and personal protection

Components with workplace control parameters

Components	CAS-No.	Value	Control parameters	Update	Basis
	7440-25-7	TWA	5 mg/m3	1997-08-04	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		TWA	5 mg/m3	1989-01-19	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000

Personal protective equipment**Respiratory protection**

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. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Eye protection

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection

impervious clothing, Flame retardant antistatic protective clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9 Physical and chemical properties:**Appearance**

Form powder
Colour light grey

Safety data

pH no data available

Melting point 2,996 °C (5,425 °F)

Boiling point 5,425 °C (9,797 °F)

Flash point not applicable

Flammability (solid, gas): The substance or mixture is a flammable solid with the subcategory 2.

Ignition temperature no data available

Lower explosion limit no data available

Upper explosion limit no data available

Density 16.69 g/cm3

Water solubility insoluble

10 Stability and reactivity

Chemical stability

Stable under recommended storage conditions.

Conditions to avoid

Heat, flames and sparks. Extremes of temperature and direct sunlight.

Materials to avoid

no data available

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Tantalum Oxides

11 Toxicological information**Acute toxicity**

LC50 Oral - mouse - 595 mg/kg

Skin corrosion/irritation

no data available

Serious eye damage/eye irritation

no data available

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

IARC: No component of this product presents at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product presents at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product presents at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product presents at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

no data available

Specific target organ toxicity - single exposure (GHS)

Inhalation - May cause respiratory irritation.

Specific target organ toxicity - repeated exposure (GHS)

no data available

Aspiration hazard

no data available

Potential health effects

Inhalation May be harmful if inhaled. Causes respiratory tract irritation.

Ingestion May be harmful if swallowed.

Skin May be harmful if absorbed through skin. Causes skin irritation.

Eyes Causes eye irritation.

Additional Information**12 Ecological information:****Toxicity**

no data available

Persistence and degradability

no data available

Bioaccumulative potential

no data available

Mobility in soil

no data available

PBT and vPvB assessment

no data available

Other adverse effects

no data available

13 Disposal considerations**Product**

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging

Dispose of as unused product.

14 Transport information**DOT (US)**

UN-Number: 3089 Class: 4.1 Packing group: II

Proper shipping name: Metal powders, flammable, n.o.s.

Marine pollutant: No

Poison Inhalation Hazard: No

IMDG

UN-Number: 3089 Class: 4.1 Packing group: II EMS-No: F-G, S-G

Proper shipping name: METAL POWDER, FLAMMABLE, N.O.S.

Marine pollutant: No

IATA

UN-Number: 3089 Class: 4.1 Packing group: II

Proper shipping name: Metal powder, flammable, n.o.s.

15 Regulations**OSHA Hazards**

Flammable solid, Irritant

DSL Status

All components of this product are on the Canadian DSL list.

SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold

(De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

Fire Hazard, Acute Health Hazard

Massachusetts Right To Know Components

Tantalum powder

CAS-No.

7440-25-7

Revision Date

1993-04-24

Pennsylvania Right To Know Components

Tantalum powder

CAS-No.

7440-25-7

Revision Date

1993-04-24

New Jersey Right To Know Components

Tantalum powder

CAS-No.

7440-25-7

Revision Date

1993-04-24

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16 Other information:

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgment of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.