



Safety Data Sheet

Skyspring Nanomaterials, Inc.

www.ssnano.com

1 Identification of substance:

Product name: Zinc Nanopowder

Product number: 9990DX

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/Information on ingredients:

Formula: Zn

Molecular Weight: 65.39

CAS No.: 7440-66-6

EINECS Number: 231-175-3

3 Hazards identification

Hazard description: F Highly flammable

Information pertaining to particular dangers for man and environment

R 15 Contact with water liberates extremely flammable gases.

R 17 Spontaneously flammable in air.

4 First aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

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

Flush eyes with water as a precaution.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5 Fire fighting measures

Suitable extinguishing media

Carbon dioxide (CO2) Dry powder

Extinguishing media which shall not be used for safety reasons

Water

Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

6 Accidental release measures

Personal precautions

Avoid dust formation. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods for cleaning up

Pick up and arrange disposal without creating dust. Do not flush with water. Keep in suitable, closed containers for disposal.

7 Handling and storage

Handling

Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition -No smoking.

Storage

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

8 Exposure controls and personal protection

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. Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. Handle with gloves.

Eye protection

Face shield and safety glasses

Skin and body protection

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

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: black

Safety data

pH: no data available

Melting point 420 °C - lit.

Boiling point 907 °C - lit.

Flash point no data available

Ignition temperature no data available

Lower explosion limit no data available

Upper explosion limit no data available

Vapour pressure 1 hPa at 487 °C

Density 7,133 g/mL at 25 °C

Water solubility no data available

10 Stability and reactivity

Storage stability

Stable under recommended storage conditions.

Conditions to avoid

Heat, flames and sparks. Exposure to moisture.

Materials to avoid

Strong acids and oxidizing agents

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Zinc/zinc oxides

11 Toxicological information

Acute toxicity

no data available

Irritation and corrosion

no data available

Sensitisation

no data available

Chronic exposure

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

Potential Health Effects

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

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

Eyes May cause eye irritation.

Ingestion May be harmful if swallowed.

Additional Information

RTECS: ZG8600000

12 Ecological information:

Elimination information (persistence and degradability)

no data available

Ecotoxicity effects

no data available

Further information on ecology

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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. Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging

Dispose of as unused product.

14 Transport information

ADR/RID

UN-Number: 1436 Class: 4.3 (4.2)

Packing group: II

Proper shipping name: ZINC POWDER

IMDG

UN-Number: 1436 Class: 4.3 (4.2)

Packing group: II

EMS-No: F-G, S-O

Proper shipping name: ZINC POWDER

Marine pollutant: No

IATA

UN-Number: 1436 Class: 4.3 (4.2)

Packing group: II

Proper shipping name: Zinc powder

IATA Passenger: Not permitted for transport

15 Regulations

Labelling according to EC Directives

EC Label

Hazard symbols

F Highly flammable

N Dangerous for the environment

R-phrases(s)

- R15 Contact with water liberates extremely flammable gases.
R17 Spontaneously flammable in air.
R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S-phrase(s)

- S43 In case of fire, use fire-fighting equipment on basis class D.
S46 If swallowed, seek medical advice immediately and show this container or label.
S60 This material and its container must be disposed of as hazardous waste.
S61 Avoid release to the environment. Refer to special instructions/ Safety data sheets.

16 Other information:

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement 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.