

**1. Identification of the substance/preparation and of the company/undertaking****Identification of the product:****Product code:** Z3020**Name of material:** Zinc nitrate hexahydrate**CAS No. :** 10196-18-6**Synonyms :** Nitric acid zinc salt hexahydrate**2. Hazards identification****Classification :**

Oxidizing solids, Category 2

Acute toxicity, Oral, Category 1

Chronic aquatic toxicity, Category 1

**Hazard Symbol :****Signal Word : Danger****Hazard Statements :**

H272: May intensify fire; oxidizer

H400: Very toxic to aquatic life

H410: Very toxic to aquatic life with long lasting effects

**Precautionary Statements :**

P210: Keep away from heat/sparks/open flames/hot surfaces – No smoking

P220: Keep/Store away from clothing/.../combustible materials

P221: Take any precaution to avoid mixing with combustibles

P273: Avoid release to the environment

P280: Wear protective gloves/protective clothing/eye protection/face protection

P391: Collect spillage.

P501: Dispose of contents/container to an approved waste disposal plant

**3. Composition/information on ingredients**

Component	CAS Number	Concentration %
Zinc Nitrate hexahydrate	10196-18-6	Min. 95

**4. First aid measures****Eye Contact:**

Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. Do not use an eye ointment. Seek medical attention.

**Skin Contact:**

After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cold water may be used. Cover the irritated skin with an emollient. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.

**Serious Skin Contact:**

Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

**Inhalation:** Allow the victim to rest in a well ventilated area. Seek immediate medical attention.

**Serious Inhalation:**

Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

**Ingestion:**

Do not induce vomiting. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive. Loosen tight clothing such as a collar, tie,

belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.

**Serious Ingestion:** Not available.

#### 5. Fire-fighting measures

**Flammability of the Product:** May be combustible at high temperature.

**Auto-Ignition Temperature:** Not available.

**Flash Points:** Not available.

**Flammable Limits:** Not available.

**Products of Combustion:** Not available.

**Fire Hazards in Presence of Various Substances:** Flammable in presence of reducing materials.

**Explosion Hazards in Presence of Various Substances:**

**Risks of explosion of the product in presence of mechanical impact:** Not available. Risks of explosion of the product in presence of static discharge: Not available.

**Fire Fighting Media and Instructions:**

Oxidizing material. Do not use water jet. Use flooding quantities of water. Avoid contact with organic materials.

**Special Remarks on Fire Hazards:** Not available.

**Special Remarks on Explosion Hazards:** Not available.

#### 6. Accidental release measures

**Small Spill:** Use appropriate tools to put the spilled solid in a convenient waste disposal container.

**Large Spill:**

Oxidizing material. Stop leak if without risk. Avoid contact with a combustible material (wood, paper, oil, clothing...). Keep substance damp using water spray. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Call for assistance on disposal.

#### 7. Handling and storage

**Precautions:**

Keep away from heat. Keep away from sources of ignition. Keep away from combustible material Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe dust.

Wear suitable protective clothing In case of insufficient ventilation, wear suitable respiratory equipment If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes

**Storage:**

Keep container dry. Keep in a cool place. Ground all equipment containing material. Oxidizing materials should be stored in a separate safety storage cabinet or room.

#### 8. Exposure controls/personal protection

**Engineering Controls:**

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

**Personal Protection:**

Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

**Personal Protection in Case of a Large Spill:**

Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

**Exposure Limits:** Not available.

#### 9. Physical and chemical properties

**Physical state and appearance:** Solid. (Crystalline solid.)

**Odor:** Not available.

**Taste:** Not available.

**Molecular Weight:** 297.47 g/mole

**Color:** White.

**pH (1% soln/water):** 6 [Acidic.]

**Boiling Point:** Decomposes.

**Melting Point:** 36.4°C (97.5°F)

**Critical Temperature:** Not available.  
**Specific Gravity:** 2.065 (Water = 1)  
**Vapor Pressure:** Not applicable.  
**Vapor Density:** Not available.  
**Volatility:** Not available.  
**Odor Threshold:** Not available.  
**Water/Oil Dist. Coeff.:** Not available.  
**Ionicity (in Water):** Not available.  
**Dispersion Properties:** See solubility in water.  
**Solubility:** Easily soluble in cold water.

#### 10. Stability and reactivity

**Stability:** The product is stable.  
**Instability Temperature:** Not available.  
**Conditions of Instability:** Not available.  
**Incompatibility with various substances:** Not available.  
**Corrosivity:** Non-corrosive in presence of glass.  
**Special Remarks on Reactivity:** Not available.  
**Special Remarks on Corrosivity:** Not available.  
**Polymerization:** No.

#### 11. Toxicological information

**Routes of Entry:** Eye contact. Inhalation. Ingestion.  
**Toxicity to Animals:** Acute oral toxicity (LD50): 926 mg/kg [Mouse].  
**Chronic Effects on Humans:** The substance is toxic to mucous membranes.  
**Other Toxic Effects on Humans:** Hazardous in case of skin contact (irritant), of ingestion, of inhalation.  
**Special Remarks on Toxicity to Animals:** Not available.  
**Special Remarks on Chronic Effects on Humans:** Not available.  
**Special Remarks on other Toxic Effects on Humans:** Not available.

#### 12. Ecological information

**Ecotoxicity:** Not available.  
**BOD5 and COD:** Not available.  
**Products of Biodegradation:**  
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.  
Toxicity of the Products of Biodegradation: The products of degradation are more toxic.  
**Special Remarks on the Products of Biodegradation:** Not 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.

##### Contaminated packaging

Dispose of as unused product.

#### 14. Transport information

**DOT Classification:** CLASS 5.1: Oxidizing material.  
**Identification:** : Zinc nitrate : UN1514 PG: II  
**Special Provisions for Transport:** Marine Pollutant

#### 15. Regulatory information

**Federal and State Regulations:** TSCA 8(b) inventory: Zinc nitrate hexahydrate  
**Other Regulations:** OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).  
**Other Classifications:**  
**WHMIS (Canada):**  
CLASS C: Oxidizing material. CLASS D-2B: Material causing other toxic effects (TOXIC).  
SDS : Z3020 Zinc nitrate hexahydrate

**DSCL (EEC):**

R22- Harmful if swallowed. R36/38- Irritating to eyes and skin.

**HMIS (U.S.A.):**

Health Hazard: 2

Fire Hazard: 1

Reactivity: 0

Personal Protection: E

**National Fire Protection Association (U.S.A.):**

Health: 2

Flammability: 1

Reactivity: 0

Specific hazard:

**Protective Equipment:**

Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent.

Wear appropriate respirator when ventilation is inadequate. Splash goggles.

**16. Other information**

**Reason for the revision:** General update.

**Date:** 16/11/2014

**Revision #1**

**Date:** 12/1/2016

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