

### Safety Data Sheet acc. to OSHA HCS (HazCom 2012)

Printing date 03/01/2022

Reviewed on 03/01/2022

#### 1 Identification

- **Product identifier**
- **Trade name: Nitrate Test Powder**
- **Catalogue number:** 465230, 465230-0
- **Application of the substance / the mixture:** Reagent for water analysis
- **Manufacturer/Supplier:**  
Tintometer Inc.  
6456 Parkland Drive  
Sarasota, FL 34243  
USA  
phone: (941) 756-6410  
fax: (941) 727-9654  
www.lovibond.us  
Made in Germany
- **Emergency telephone number:** + 1 866 928 0789 (English, French, Spanish)

#### 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS09 Environment

Aquatic Acute 1 H400 Very toxic to aquatic life.  
Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.

- **Label elements**
- **GHS label elements** The product is classified and labeled according to the Hazard Communication Standard (HCS).
- **Hazard pictograms**




GHS09

- **Signal word** Warning
- **Hazard statements**  
H400 Very toxic to aquatic life.  
H410 Very toxic to aquatic life with long lasting effects.
- **Precautionary statements**  
P273 Avoid release to the environment.  
P391 Collect spillage.  
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Other hazards** No further relevant information available.

#### 3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of organic and inorganic compounds
- **Composition and Information on Ingredients:**  
Percent ranges are used due to the confidential product information.

CAS: 7440-66-6 EINECS: 231-175-3 Index number: 030-001-01-9 RTECS: ZG8600000	zinc powder - zinc dust (stabilized)  Aquatic Acute 1, H400; Aquatic Chronic 1, H410	60–70%
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Trade name: Nitrate Test Powder

CAS: 7727-43-7 EINECS: 231-784-4 RTECS: CR 0600000	barium sulfate	(Contd. of page 1) 25–35%
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· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

### 4 First-aid measures

- **Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:**  
Rinse opened eye for several minutes (at least 15 min) under running water. If symptoms persist, consult a doctor.
- **After swallowing:**  
Rinse out mouth and then drink 1-2 glasses of water.  
If symptoms persist consult doctor.
- **Most important symptoms and effects, both acute and delayed**  
after resorption:  
fever  
gastric or intestinal disorders  
sickness  
vomiting  
cardiovascular disorders
- **Indication of any immediate medical attention and special treatment needed:** No further relevant information available.

### 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**  
Cement  
Dry sand  
Special powder for metal fires.
- **For safety reasons unsuitable extinguishing agents:**  
Water  
Foam
- **Special hazards arising from the substance or mixture**  
Can burn in fire.  
Risk of dust explosion.  
Formation of toxic gases is possible during heating or in case of fire.  
In case of fire, the following can be released:  
Sulfur oxides (SO<sub>x</sub>)  
Nitrogen oxides (NO<sub>x</sub>)  
Hydrogen  
Zinc oxide
- **Advice for firefighters**
- **Protective equipment:**  
Wear self-contained respiratory protective device.  
Wear fully protective suit.
- **Additional information**  
Collect contaminated fire fighting water separately. It must not enter the sewage system.  
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.  
Ambient fire may liberate hazardous vapours.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
- **Advice for non-emergency personnel:**  
Wear protective equipment. Keep unprotected persons away.  
Ensure adequate ventilation  
Avoid breathing dust.
- **Advice for emergency responders:** Protective equipment: see section 8

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- **Environmental precautions:**  
Do not allow product to reach sewage system or any water course.  
Inform respective authorities in case of seepage into water course or sewage system.
- **Methods and material for containment and cleaning up:**  
Ensure adequate ventilation.  
Pick up mechanically.  
Dispose contaminated material as waste according to item 13.
- **Reference to other sections**  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

## 7 Handling and storage

- **Precautions for safe handling**
- **Advice on safe handling:**  
Prevent formation of dust.  
Thorough dedusting.  
Keep ignition sources away - Do not smoke.  
Take precautionary measures against static discharge.
- **Hygiene measures:**  
Take off immediately all contaminated clothing.  
Wash hands before breaks and at the end of work.  
Do not eat, drink or smoke when using this product.
- **Conditions for safe storage, including any incompatibilities**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:**  
Do not store together with oxidizing and acidic materials.  
Store away from flammable substances.  
store away from water
- **Further information about storage conditions:**  
Keep receptacle tightly sealed.  
Protect from heat and direct sunlight.  
Protect from exposure to the light.  
Store in dry conditions.  
Protect from humidity and water.
- **Recommended storage temperature:** 20°C +/- 5°C (approx. 68°F)
- **Specific end use(s)** No further relevant information available.

## \* 8 Exposure controls/personal protection

- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**  
The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.

<b>CAS: 7727-43-7 barium sulfate</b>	
PEL (USA)	Long-term value: 15* 5** mg/m <sup>3</sup> *total dust **respirable fraction
REL (USA)	Long-term value: 10* 5** mg/m <sup>3</sup> *total dust **respirable fraction
TLV (USA)	Long-term value: 5* mg/m <sup>3</sup> *inhalable fraction; E
EL (Canada)	Long-term value: 5 mg/m <sup>3</sup> inhalable
EV (Canada)	Long-term value: 10 mg/m <sup>3</sup> total dust

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Engineering measures:**  
Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.  
See item 7.

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- **Personal protective equipment:**  
Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled.
- **Breathing equipment:** Use respiratory protective device against the effects of fume/dust/aerosol.
- **Recommended filter device for short term use:** Filter P2
- **Protection of hands:**  
Preventive skin protection by use of skin-protecting agents is recommended.  
After use of gloves apply skin-cleaning agents and skin cosmetics.
- **Material of gloves**  
Nitrile rubber, NBR  
Recommended thickness of the material:  $\geq 0.11$  mm
- **Penetration time of glove material**  
Value for the permeation: Level  $\leq 1$  (10 min)  
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:**  
Safety glasses  
use against the effects of fumes / dust
- **Body protection:** Protective work clothing
- **Limitation and supervision of exposure into the environment:**  
Do not allow product to reach sewage system or any water course.

## 9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **Appearance:**
- **Form / Physical state:** Powder
- **Color:** Grey
- **Odor:** Odorless
- **Odor threshold:** Not applicable.
- **pH-value (17.3 g/l) at 20°C (68°F):** 7.1
- **Melting point/freezing point:** Not determined.
- **Initial boiling point and boiling range:** Not determined.
- **Flash point:** Not applicable (solid).
- **Flammability (solid, gas):** Can burn in fire.
- **Ignition temperature:** 460°C (860°F) (CAS 7440-66-6, CAS: 7440-66-6 zinc powder - zinc dust (stabilized))
- **Decomposition temperature:** Not determined.
- **Auto-ignition temperature:** Product is not self-igniting.
- **Danger of explosion:** Product does not present an explosion hazard.  
Risk of dust explosion if enriched with fine dust in the presence of air.
- **Flammability or explosive limits:**
- **Lower:** Not applicable.
- **Upper:** Not applicable.
- **Oxidizing properties:** none
- **Vapor Pressure:** Not applicable.
- **Density at 20°C (68°F):** 6.12 g/cm<sup>3</sup> (51.07 lbs/gal)
- **Relative density:** Not determined.
- **Vapor density:** Not applicable.
- **Evaporation rate:** Not applicable.
- **Solubility(ies)**
- **Water:** Partially insoluble.
- **Partition coefficient (n-octanol/water):** Not applicable (mixture).
- **Viscosity:** Not applicable.
- **Kinematic:** Not applicable (solid).
- **Other information**
- **Solids content:** 100 %

## 10 Stability and reactivity

- **Reactivity** Risk of dust explosion.
- **Chemical stability** Stable at ambient temperature (room temperature).

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- **Possibility of hazardous reactions**  
 Reacts with humid air.  
 Reacts with peroxides.  
 Reacts with halogenated compounds.  
 Reacts with oxidizing agents.  
 Reacts with acids and alkali (lyes).  
 Develops readily flammable gases / fumes.
- **Conditions to avoid** Exposure to moisture.
- **Incompatible materials:** combustible materials
- **Hazardous decomposition products:**  
 hydrogen  
 In case of fire: see section 5.

## \*11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:** Based on available data, the classification criteria are not met.

<b>LD/LC50 values that are relevant for classification:</b>		
<b>CAS: 7440-66-6 zinc powder - zinc dust (stabilized)</b>		
Oral	LD50.	>2000 mg/kg (rat) (Registrant, Echa: limit test, no mortality observed)
<b>CAS: 7727-43-7 barium sulfate</b>		
Oral	LD50	20000 mg/kg (rat)

- **Primary irritant effect:**

- **on the skin:** Based on available data, the classification criteria are not met.
- **on the eye:** Based on available data, the classification criteria are not met.
- **Sensitization:** Based on available data, the classification criteria are not met.

- **Carcinogenic categories**

<b>IARC (International Agency for Research on Cancer)</b>
None of the ingredients is listed.

<b>NTP (National Toxicology Program)</b>
None of the ingredients is listed.

<b>OSHA-Ca (Occupational Safety &amp; Health Administration)</b>
None of the ingredients is listed.

- **Other information:** see section 8 / 15

- **Synergistic Products:** None

- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction):** The following statements refer to the mixture:

- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT (specific target organ toxicity) -single exposure** Based on available data, the classification criteria are not met.
- **STOT (specific target organ toxicity) -repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

- **Information on components:**

CAS 7440-66-6: Did not show teratogenic effects in animal experiments (IUCLID).  
 CAS 7440-66-6: Did not show carcinogenic effects in animal experiments (IUCLID).  
 CAS 7440-66-6: No impairment of reproductive performance in animal experiments (IUCLID).

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### \*12 Ecological information

- **Toxicity**

- **Aquatic toxicity:**

**CAS: 7440-66-6 zinc powder - zinc dust (stabilized)**

EC50	0.356 mg/l/48h (Daphnia magna) (Merck)
NOEC	0.169 mg/l/96h (fish) (30d) (Registrant, ECHA: Cottus bairdii)
NOEC	0.0727 mg/l (Daphnia magna) (21 d) (Merck)
EC50	0.106 mg/l/72h (Pseudokirchneriella subcapitata) (Merck)
LC50	0.238–0.269 mg/l/96h (fathead minnow) (Merck)

**CAS: 7727-43-7 barium sulfate**

EC50	32 mg/l/48h (Daphnia magna) Ba (ion)
EC50	52 mg/l/24h (Daphnia magna) Ba (ion)

- **Bacterial toxicity:** sulfates toxic > 2.5 g/l

- **Other information:**

Toxic for fish:  
sulfates > 7 g/l  
Zn > 0.1 mg/l  
Ba > 158 mg/l

- **Persistence and degradability** No further relevant information available.

- **Bioaccumulative potential** No further relevant information available.

- **Mobility in soil** No further relevant information available.

- **Other adverse effects**

Depending on the concentration, phosphorus and/or nitrogen compounds may contribute to the eutrophication of water supplies.  
Avoid transfer into the environment.

### \*13 Disposal considerations

- **Waste treatment methods**

- **Recommendation:**

Disposal recommendation: as waste containing heavy metals (contains very small amounts of heavy metals)  
Disposal recommendation: as waste containing heavy metals (contains very small amounts of heavy metals)  
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.  
Hand over to hazardous waste disposers.

- **Uncleaned packagings:**

- **Recommendation:** Disposal must be made according to official regulations.

### \*14 Transport information

- **UN-Number**

- **DOT**

- **IMDG, IATA**

none  
UN3077

- **UN proper shipping name**

- **DOT**

- **IMDG**

none  
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,  
N.O.S. (zinc powder - zinc dust (stabilized)), MARINE  
POLLUTANT

- **IATA**

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,  
N.O.S. (zinc powder - zinc dust (stabilized))

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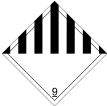

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· Transport hazard class(es)	
· DOT	
· Class	none
<hr/>	
· IMDG, IATA	
	
· Class	9 Miscellaneous dangerous substances and articles
· Label	9
· Packing group	
· DOT	none
· IMDG, IATA	III
· Environmental hazards:	Product contains environmentally hazardous substances: zinc powder - zinc dust (stabilized)
· Marine pollutant:	Yes Symbol (fish and tree)
· Special marking (IATA):	Symbol (fish and tree)
· Special precautions for user	Warning: Miscellaneous dangerous substances and articles
· Hazard identification number (Kemler code):	90
· EMS Number:	F-A,S-F
· Segregation groups	Heavy metals and their salts (including their organometallic compounds)
· Stowage Category	A
· Stowage Code	SW23 When transported in BK3 bulk container, see 7.6.2.12 and 7.7.3.9.
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
<hr/>	
· IMDG	
· Limited quantities (LQ)	5 kg
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g

## \*15 Regulatory information

· Safety, health and environmental regulations/legislation specific for the substance or mixture
· Sara
· Section 355 (Extremely hazardous substances):
None of the ingredients is listed.
· Section 313 (Specific toxic chemical listings):
CAS: 7440-66-6   zinc powder - zinc dust (stabilized)
CAS: 7727-43-7   barium sulfate
· TSCA (Toxic Substances Control Act):
All components have the value ACTIVE.
· Hazardous Air Pollutants
None of the ingredients is listed.
· Proposition 65
· Chemicals known to cause cancer:
None of the ingredients is listed.
· Chemicals known to cause reproductive toxicity for females:
None of the ingredients is listed.

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<b>Chemicals known to cause reproductive toxicity for males:</b>		
None of the ingredients is listed.		
<b>Chemicals known to cause developmental toxicity:</b>		
None of the ingredients is listed.		
<b>New Jersey Right-to-Know List:</b>		
CAS: 7440-66-6	zinc powder - zinc dust (stabilized)	
CAS: 7727-43-7	barium sulfate	
<b>New Jersey Special Hazardous Substance List:</b>		
CAS: 7440-66-6	zinc powder - zinc dust (stabilized)	F3, R1
<b>Pennsylvania Right-to-Know List:</b>		
CAS: 7440-66-6	zinc powder - zinc dust (stabilized)	
CAS: 7727-43-7	barium sulfate	
<b>Pennsylvania Special Hazardous Substance List:</b>		
CAS: 7440-66-6	zinc powder - zinc dust (stabilized)	E
<b>EPA (Environmental Protection Agency)</b>		
CAS: 7440-66-6	zinc powder - zinc dust (stabilized)	D, I, II
CAS: 7727-43-7	barium sulfate	D, CBD(inh), NL(oral)
<b>NIOSH-Ca (National Institute for Occupational Safety and Health)</b>		
None of the ingredients is listed.		
<b>Information about limitation of use:</b> Not required.		
<b>Chemical safety assessment:</b> A Chemical Safety Assessment has not been carried out.		

## 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

### Relevant phrases

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

**Date of preparation / last revision** 03/01/2022 / 75

### Abbreviations and acronyms:

ICAO: International Civil Aviation Organisation

EC50: effective concentration, 50 percent (in vivo)

OECD: Organisation for Economic Co-operation and Development

STOT: specific target organ toxicity

SE: single exposure

RE: repeated exposure

EC50: half maximal effective concentration

IC50: half maximal inhibitory concentration

NOEL or NOEC: No Observed Effect Level or Concentration

ACGIH® - American Conference of Governmental Industrial Hygienists

•A1 - Confirmed human carcinogen

•A2 - Suspected human carcinogen

•A3 - Confirmed animal carcinogen with unknown relevance to humans

•A4 - Not classifiable as a human carcinogen

•A5 - Not suspected as a human carcinogen

IARC - International Agency for Research on Cancer

•Group 1 - Carcinogenic to humans

•Group 2A - Probably carcinogenic to humans

•Group 2B - Possibly carcinogenic to humans

•Group 3 - Not classifiable as to carcinogenicity to humans

•Group 4 - Probably not carcinogenic to humans

NTP - National Toxicology Program, U.S. Department of Health and Human Services

•Group K - Known to be Human Carcinogens

•Group R - Reasonably Anticipated to be Human Carcinogens

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

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PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

**Sources**

Data arise from safety data sheets, reference works and literature.

RTECS (Registry of Toxic Effects of Chemical Substances )

ECHA: European CHemicals Agency <http://echa.europa.eu>· \* **Data compared to the previous version altered.**

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