

Safety Data Sheet acc. to OSHA HCS

Date Prepared: 05/10/2016

Reviewed On: 12/17/2015

1 Identification

- **Product Identifier:**
- **Product Name:** Nitrate C Reagent
- **Catalog Number:** 261207
- **EC number:**
231-175-3
- **Index Number:**
030-001-00-1
- **Application of the substance / the mixture** Laboratory Chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
BD Diagnostic Systems
7 Loveton Circle
Sparks, MD 21152
Telephone: (410) 771 - 0100 or (800) 638 – 8663
Email Address: Technical_Services@bd.com
- **Information Department:** Technical Service
- **Emergency telephone number:**
In case of a chemical emergency, spill, fire, exposure, or accident, contact BD Diagnostic Systems (410) 771-0100 or (800)-638-8663, or ChemTrec at (800) 424-9300.

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

Pyr. Sol. 1 H250 Catches fire spontaneously if exposed to air.

Water-react. 1 H260 In contact with water releases flammable gases, which may ignite spontaneously.



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 substance is classified and labeled according to the Globally Harmonized System (GHS).

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Hazard pictograms



GHS02 GHS09

Signal word Danger

Hazard statements

H250 Catches fire spontaneously if exposed to air.

H260 In contact with water releases flammable gases, which may ignite spontaneously.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements

P223 Do not allow contact with water.

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

P222 Do not allow contact with air.

P231+P232 Handle under inert gas. Protect from moisture.

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

P273 Avoid release to the environment.

P370+P378 In case of fire: Use for extinction: CO2, sand, extinguishing powder.

P335+P334 Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages.

P391 Collect spillage.

P422 Store contents under inert gas.

P402+P404 Store in a dry place. Store in a closed container.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

NFPA ratings (scale 0-4)



Health = 1

Flammability = 4

Reactivity = 2

The substance demonstrates unusual reactivity with water.

HMIS ratings (scale 0-4)

HEALTH	1	Health = 1
FIRE	4	Flammability = 4
REACTIVITY	2	Reactivity = 2

Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

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3 Composition/information on ingredients

- **Chemical characterization: Substances**
- **CAS No. Description:**
zinc powder
- **Identification number(s):**
- **EC number:** 231-175-3
- **Index number:** 030-001-00-1

- **Impurities and stabilising additives:**

CAS: 7440-66-6	zinc powder
EINECS: 231-175-3	Pyr. Sol. 1, H250; Water-react. 1, H260; Aquatic Acute 1, H400; Aquatic Chronic 1, H410

4 First-aid measures

- **Description of first aid measures**
- **General information** No special measures required.
- **After inhalation** Seek medical treatment in case of complaints.
- **After skin contact** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact**
Rinse opened eye for 15 minutes under running water. Then consult a doctor.
- **After swallowing** Call a doctor immediately.
- **Information for doctor**
- **Most important symptoms and effects, both acute and delayed** Respiratory arrest
- **Danger**
Danger of impaired breathing.
Danger of pulmonary edema.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents**
Extinguishing powder. Do not use water.
Special powder for metal fires. Do not use water.
CO₂, sand, extinguishing powder. Do not use water.
- **For safety reasons unsuitable extinguishing agents** Water.
- **Special hazards arising from the substance or mixture**
During heating or in case of fire toxic gases may be produced.

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- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:** Wipe up with damp sponge or mop.
- **Methods and material for containment and cleaning up:**
Do not flush with water or aqueous cleansing agents
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling**
- **Precautions for safe handling** Prevent formation of dust.
- **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
- **Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:**
Do not store together with acids.
Do not store together with alkaline material.
Store away from water.
- **Further information about storage conditions:**
Store in cool, dry conditions in well sealed containers.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:**
No further data; see Section 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:** Not required.
- **Additional information:** The lists that were valid during the creation were used as basis.

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- **Exposure controls**
- **Personal Protective Equipment**
- **General protective and hygienic measures**
Wash hands before breaks and at the end of work.
- **Breathing equipment:**
In case of brief exposure, use a chemical fume hood or a NIOSH/MSHA-approved respirator.
- **Protection of hands:**



Chemical resistant gloves (i.e. nitrile, or equivalent).

- **Eye protection:** Safety glasses
- **Body protection:** Protective work clothing (lab coat).

9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**

Form:	Powder
Color:	Silver gray
Odor:	Odorless
- **Change in condition**

Melting point/Melting range:	419.5 °C (787 °F)
Boiling point/Boiling range:	907 °C (1665 °F)
- **Flash point:** Not applicable
- **Flammability (solid, gaseous)** Contact with water liberates extremely flammable gases.
- **Auto igniting:** Spontaneously flammable in air.
- **Danger of explosion:** Product does not present an explosion hazard.
- **Density:** Not determined
- **Solubility in / Miscibility with**

Water:	Insoluble
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- **Other information** No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.

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- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **Possibility of hazardous reactions**
Contact with water releases flammable gases
Develops toxic gases / fumes
Reacts with alcohols, amines, aqueous acids and alkalis
Reacts with various metals
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:**
Incompatible materials: amines, cadmium, chlorinated solvents, sulfur, strong acids, strong bases, moisture sensitive, and air sensitive.
- **Hazardous decomposition products:**
Poisonous gases/vapors
Zinc oxide (ZnO)

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
 - **on the skin:** Irritant to skin and mucous membranes.
 - **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Subacute to chronic toxicity:** Target organs: respiratory system
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
- **Carcinogenic categories**

· IARC (International Agency for Research on Cancer)

Substance is not listed.

· NTP (National Toxicology Program)
--

Substance is not listed.

· OSHA-Ca (Occupational Safety & Health Administration)
--

Substance is not listed.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.

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- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Other information:**
The ecological effects have not been thoroughly investigated, but currently none have been identified.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
RCRA hazardous waste - RCRA # D001, D003 (ignitable, reactive).
Dispose of material in accordance with federal (40 CFR 261.3), state and local requirements.
Must not be disposed of with solid waste.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to state and federal regulations.

14 Transport information

- | | |
|---------------------|--------|
| · UN-Number | |
| · DOT | UN1436 |
| · IMDG, IATA | 1436 |

- | | |
|----------------------------------|-------------|
| · UN proper shipping name | |
| · IMDG, IATA | ZINC POWDER |

- **Transport hazard class(es)**

- **DOT**



- | | |
|----------------|---|
| · Class | 4.3 Substances which, in contact with water, emit flammable gases |
|----------------|---|

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· **Label** 4.3 + 4.2

· **IMDG, IATA**



· **Class** 4.3 Substances which, in contact with water, emit flammable gases

· **Label** 4.3 + 4.2

· **Packing group**

· **DOT, IMDG, IATA** II

· **Environmental hazards:**

· **Marine pollutant:** No

· **Special marking (ADR):** Symbol (fish and tree)

· **Special precautions for user** Warning: Substances which, in contact with water, emit flammable gases

· **Danger code (Kemler):** 423

· **EMS Number:** F-G,S-O

· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

· **Transport/Additional information:**

· **DOT**

· **Remarks:** This product can be transported using the "small quantity" exception. This package conforms to 49 CFR 173.4 for domestic highway or rail transport only. The Hazard Class, Identification number, and Packing group listed above is for informational purposes only.

· **IATA**

· **Remarks:** This product can be transported using the exception: Dangerous Goods in Excepted Quantities. The Hazard class, Identification number, and Packing group listed above is for informational purposes only.

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· UN "Model Regulation":	UN1436, ZINC POWDER, ENVIRONMENTALLY HAZARDOUS, 4.3 (4.2), II
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15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **SARA Section 355 (extremely hazardous substances)**

Substance is not listed.

· **SARA Section 313 (specific toxic chemical listings)**

Substance is listed.

· **TSCA (Toxic Substances Control Act)**

Substance is listed.

· **California Proposition 65 - Chemicals known to cause cancer**

Substance is not listed.

· **California Proposition 65 - Chemicals known to cause reproductive toxicity for females:**

Substance is not listed.

· **California Proposition 65 - Chemicals known to cause reproductive toxicity for males:**

Substance is not listed.

· **California Proposition 65 - Chemicals known to cause developmental toxicity:**

Substance is not listed.

· **Carcinogenic categories**

· **TLV (Threshold Limit Value established by ACGIH)**

Substance is not listed.

· **GHS label elements**

The substance is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**


GHS02 GHS09

· **Signal word** Danger

· **Hazard statements**

H250 Catches fire spontaneously if exposed to air.

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H260 In contact with water releases flammable gases, which may ignite spontaneously.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements

P223 Do not allow contact with water.

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

P222 Do not allow contact with air.

P231+P232 Handle under inert gas. Protect from moisture.

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

P273 Avoid release to the environment.

P370+P378 In case of fire: Use for extinction: CO₂, sand, extinguishing powder.

P335+P334 Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages.

P391 Collect spillage.

P422 Store contents under inert gas.

P402+P404 Store in a dry place. Store in a closed container.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

• **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

To the best of our knowledge, the information contained herein is accurate. However, neither Becton, Dickinson and Company or any of its subsidiaries assumes any liabilities whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we can not guarantee that these are the only hazards that exist.

Department issuing SDS:

Environmental, Health & Safety

Created by Michael J. Spinazzola

• **Contact:** Technical Service Representative

• **Date of preparation / last revision** 05/10/2016 / -

Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

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

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

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PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

LC50: Lethal concentration, 50 percent

BEI: Biological Exposure Limit

Pyr. Sol. 1: Pyrophoric solids – Category 1

Water-react. 1: Substances and mixtures which in contact with water emit flammable gases – Category 1

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

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