

1 Identification of substance:

- **Product name:** Nitrate C Reagent
- **Catalog number:** 261207
- **Manufacturer/Supplier:**
BD Diagnostic Systems
7 Loveton Circle
Sparks, MD 21152
Tel: (410) 771-0100 or (800) 638-8663
- **Information department:** Technical Services
- **Emergency information:**
In case of a chemical emergency, spill, fire, exposure, or accident contact BD Diagnostic Systems at (410)771-0100 or (800)638-8663, or ChemTrec at (800)424-9300.

2 Composition/Data on components:

- **Chemical characterization:**
- **CAS No. Description:**
7440-66-6 zinc powder 100.00%
- **Identification number(s):**
- **EINECS Number:** 231-175-3
- **EU Number:** 030-001-00-1

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.
R 36/38 Irritating to eyes and skin.
- **NFPA ratings (scale 0-4)**



Health = 3
Fire = 4
Reactivity = 2

The substance demonstrates unusual reactivity with water.

4 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.

(Contd. on page 2)

USA

Printing date 01/11/2006

Reviewed on 06/14/2005

Product name: Nitrate C Reagent

(Contd. of page 1)

- **Information for doctor**
- **The following symptoms may occur:** Respiratory arrest
- **Danger**
Danger of impaired breathing.
Danger of pulmonary edema.

5 Fire fighting measures

- **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 caused by the material, its products of combustion or resulting gases:**
During heating or in case of fire toxic gases may be produced.
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Person-related safety precautions:** Not required.
- **Measures for environmental protection:** Wipe up with damp sponge or mop.
- **Measures for cleaning/collecting:** Do not flush with water or aqueous cleansing agents
- **Additional information:**
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**
- **Information for safe handling:** Prevent formation of dust.
- **Information about protection against explosions and fires:** Keep ignition sources away - Do not smoke.
- **Storage**
- **Requirements to be met by storerooms and receptacles:** 15 - 30 C
- **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.

8 Exposure controls and personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **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.

(Contd. on page 3)

USA

Product name: Nitrate C Reagent

(Contd. of page 2)

- **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:

· General Information

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
---------------	-----------

10 Stability and reactivity

· Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.

· Materials to be avoided:

Incompatible materials: amines, cadmium, chlorinated solvents, sulfur, strong acids, strong bases, moisture sensitive, and air sensitive.

· Dangerous reactions

Contact with water releases flammable gases

Develops toxic gases / fumes

Reacts with alcohols, amines, aqueous acids and alkalis

Reacts with various metals

· Dangerous products of decomposition:

Poisonous gases/vapors

(Contd. on page 4)

Printing date 01/11/2006

Reviewed on 06/14/2005

Product name: Nitrate C Reagent

Zinc oxide (ZnO)

(Contd. of page 3)

11 Toxicological information

- **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:**

Irritant

The product shows the following dangers according to internally approved calculation methods for preparations:

12 Ecological information:

- **Ecotoxicological effects:**
- **Other information:**
The ecological effects have not been thoroughly investigated, but currently none have been identified.
- **General notes:** Water danger class 3 (Self-assessment): extremely hazardous for water.

13 Disposal considerations

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

14 Transport information

- **DOT regulations:**



- **Hazard class:** 4.3
- **Identification number:** UN1436
- **Packing group:** II
- **Proper shipping name:** ZINC POWDER
- **Label:** 4.3 + 4.2

(Contd. on page 5)

USA

Product name: Nitrate C Reagent

(Contd. of page 4)

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

· **Land transport ADR/RID (cross-border)**



· **ADR/RID class:** 4.3 (WS) Substances which, in contact with water, emit flammable gases
 · **Danger code (Kemler):** 423
 · **UN-Number:** 1436
 · **Packaging group:** II
 · **Description of goods:** 1436 ZINC POWDER

· **Maritime transport IMDG:**



· **IMDG Class:** 4.3
 · **UN Number:** 1436
 · **Label:** 4.3 +4.2
 · **Packaging group:** II
 · **EMS Number:** F-G,S-O
 · **Marine pollutant:** No
 · **Proper shipping name:** ZINC POWDER

· **Air transport ICAO-TI and IATA-DGR:**



· **ICAO/IATA Class:** 4.3
 · **UN/ID Number:** 1436
 · **Label:** 4.3 +4.2
 · **Packaging group:** II
 · **Proper shipping name:** ZINC POWDER
 · **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.

15 Regulations

· **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.

(Contd. on page 6)



Printing date 01/11/2006

Reviewed on 06/14/2005

Product name: Nitrate C Reagent

(Contd. of page 5)

· **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.

· **Carcinogenicity categories**

· **IARC (International Agency for Research on Cancer)**

Substance is not listed.

· **NTP (National Toxicology Program)**

Substance is not listed.

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

Substance is not listed.

· **Product related hazard information:**

The product has been classified and marked in accordance with regulations on hazardous materials.

· **Hazard symbols:**

F Highly flammable

· **Hazard-determining components of labeling:**

zinc powder

· **Risk phrases:**

15 Contact with water liberates extremely flammable gases.

17 Spontaneously flammable in air.

36/38 Irritating to eyes and skin.

· **Safety phrases:**

2 Keep out of the reach of children.

7/8 Keep container tightly closed and dry.

43 In case of fire, use sand, carbon dioxide or powdered extinguishing agent. Never use water.

60 This material and its container must be disposed of as hazardous waste.

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 cannot guarantee that these are the only hazards that exist.

· **Department issuing MSDS:** Safety and Environment Department

· **Contact:** Technical Service Representative