

Date Prepared: 10/15/2008

Reviewed On: 12/21/2007

1 Identification of substance:

- **Product name:** Ninhydrin Reagent Dropper
- **Catalog number:** 261201
- **Manufacturer/Supplier:**
 BD Diagnostic Systems
 7 Loveton Circle
 Sparks, MD 21152
 Telephone: (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 (410) 771-0100 or (800)-638-8663, or ChemTrec at (800) 424-9300.

2 Composition/Data on components:

- **Chemical characterization:**
- **CAS No. Description:**
 .
- **Chemical characterization**
- **Description:** Mixture consisting of the following components.

· **Dangerous components:**

64-17-5	ethanol	43.1%
485-47-2	Ninhydrin	3.72%

3 Hazards identification

· **Hazard description:**



F Highly flammable
 Xn Harmful

· **Information pertaining to particular dangers for man and environment**

- R 11 Highly flammable.
- R 36/37/38 Irritating to eyes, respiratory system and skin.
- R 40 Limited evidence of a carcinogenic effect.
- R 63 Possible risk of harm to the unborn child

· **Classification system**

The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

· **NFPA ratings (scale 0-4)**



Health = 2
 Fire = 3
 Reactivity = 0

(Contd. on page 2)

CDN

Date Prepared: 10/15/2008

Reviewed On: 12/21/2007

Product name: Ninhydrin Reagent Dropper

(Contd. of page 1)

· HMIS ratings (scale 0-4)

HEALTH	*1
FIRE	3
REACTIVITY	0

Health = *1

Fire = 3

Reactivity = 0

4 First aid measures

- **General information** No special measures required.
- **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 15 minutes under running water. Then consult a doctor.
- **After swallowing** Immediately call a doctor.
- **Information for doctor** Show this product label or this MSDS.

5 Fire fighting measures

- **Suitable extinguishing agents**
CO₂, ABC multipurpose dry chemical or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **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:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders).

7 Handling and storage

- **Handling**
- **Information for safe handling:** Ensure good ventilation/exhaustion at the workplace.
- **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Storage**
- **Requirements to be met by storerooms and receptacles:** 15 - 30 C
- **Information about storage in one common storage facility:** Store away from oxidizing agents.
- **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:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

(Contd. on page 3)

Date Prepared: 10/15/2008

Reviewed On: 12/21/2007

Product name: Ninhydrin Reagent Dropper

(Contd. of page 2)

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Personal Protective Equipment**
- **General protective and hygienic measures**
 Keep away from foodstuffs, beverages and feed.
 Immediately remove all soiled and contaminated clothing.
 Wash hands before breaks and at the end of work.
 Avoid contact with the eyes and skin.
- **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: Liquid
Color: Light yellow
Odor: Characteristic

· Change in condition

Melting point/Melting range: -114.5°C
Boiling point/Boiling range: 78°C

· **Flash point:** 13°C

· **Ignition temperature:** 425°C

· **Auto igniting:** Product is not self igniting.

· **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

· Explosion limits:

Lower: 3.5 Vol %
Upper: 15 Vol %

· **Density:** Not determined

· Solubility in / Miscibility with

Water: Soluble

· **pH-value:** Neutral

· Solvent content:

Organic solvents: 43.1 %

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

(Contd. on page 4)

Date Prepared: 10/15/2008

Reviewed On: 12/21/2007

Product name: Ninhydrin Reagent Dropper

(Contd. of page 3)

- **Materials to be avoided:** Incompatible material: strong oxidizers.
- **Dangerous reactions** No dangerous reactions known
- **Dangerous products of decomposition:** Carbon monoxide (CO) and carbon dioxide (CO₂)

11 Toxicological information

- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

64-17-5 ethanol

Oral	LD50	3450 mg/kg (MOU)
		7060 mg/kg (rat)

- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant

12 Ecological information:

- **Ecotoxic effects:**
- **Other information:**
The ecological effects have not been thoroughly investigated, but currently none have been identified.
- **General notes:** Not known to be hazardous to water.

13 Disposal considerations

- **Product:**
- **Recommendation**
Must not be disposed of with solid waste.
Must adhere to official regulations.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to state and federal regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- **DOT regulations:**



- **Hazard class:** 3
- **Identification number:** UN1993

(Contd. on page 5)

Date Prepared: 10/15/2008

Reviewed On: 12/21/2007

Product name: Ninhydrin Reagent Dropper

(Contd. of page 4)

- **Packing group:** II
- **Proper shipping name:** FLAMMABLE LIQUID, N.O.S. (ethanol)
- **Label** 3
- **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.

 · **TDG (Transport dangerous goods):**


- **TDG class:** 3 (F1) Flammable liquids
- **Danger code (Kemler):** 33
- **UN-Number:** 1993
- **Packaging group:** II

 · **Maritime transport IMDG:**


- **IMDG Class:** 3
- **UN Number:** 1993
- **Label** 3
- **Packaging group:** II
- **EMS Number:** F-E,S-E
- **Marine pollutant:** No
- **Proper shipping name:** FLAMMABLE LIQUID, N.O.S. (ethanol)

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


- **ICAO/IATA Class:** 3
- **UN/ID Number:** 1993
- **Label** 3
- **Packaging group:** II
- **Proper shipping name:** FLAMMABLE LIQUID, N.O.S. (ethanol)

15 Regulations

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

None of the ingredients is listed.

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

64-17-5 ethanol

(Contd. on page 6)

Date Prepared: 10/15/2008

Reviewed On: 12/21/2007

Product name: Ninhydrin Reagent Dropper

(Contd. of page 5)

· TSCA (Toxic Substances Control Act)

All ingredients are listed.

· Carcinogenicity categories
· IARC (International Agency for Research on Cancer)

None of the ingredients is listed.

· NTP (National Toxicology Program)

None of the ingredients is listed.

· TLV (Threshold Limit Value established by ACGIH)

64-17-5 ethanol

A4

· Canadian Substance Listing
· Canadian Domestic Substance List (DSL)

All ingredients are listed.

· Canadian Ingredient Disclosure List (limit 0.1%)

64-17-5 ethanol

· Canadian Ingredient Disclosure List (limit 1%)

None of the ingredients is listed.

· Product related hazard information:

This product has been classified according to the hazard criteria of the Controlled Products Regulations (CPR), and the MSDS contains all of the information required by the CPR.

· Hazard symbols:

 F Highly flammable
 Xn Harmful

· Hazard-determining components of labeling:

ethanol

· Risk phrases:

 11 Highly flammable.
 36/37/38 Irritating to eyes, respiratory system and skin.
 40 Limited evidence of a carcinogenic effect.
 63 Possible risk of harm to the unborn child

· Safety phrases:

 7/9 Keep container tightly closed and in a well-ventilated place.
 16 Keep away from sources of ignition - No smoking.
 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 can not guarantee that these are the only hazards that exist.

· Department issuing MSDS:

 Safety and Environment Department
 MSDS created by Michael J. Spinazzola

· Contact: Technical Service Representative