

1 Identification of substance:

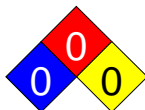
- **Product name:** Gram Diluent
(Gram Iodine (Unstabilized))
- **Catalog number:** 212530
- **Manufacturer/Supplier:**
BD Diagnostic Systems
7 Loveton Circle
Sparks, MD 21152
Tel: (410) 771-0100 or (800) 638-8663
- **Information department:** Technical Services
- **Emergency information:**
In case of 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**
- **Description:** Mixture consisting of the following components.
- **Dangerous components:** Void

3 Hazards identification

- **Hazard description:**
This product contains no hazardous constituents, or the concentration of all chemical constituents are below the regulatory threshold limits described by Occupational Safety Health Administration Hazard Communication Standard 29 CFR 1910.1200 and the European Directive 91/155/EEC, and 93/112/EC.
- **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 = 0
Fire = 0
Reactivity = 0

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 several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing** Immediately call a doctor.
- **Information for doctor** Show this product label or this MSDS.

Product name: Gram Diluent
(Gram Iodine (Unstabilized))

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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:** No special measures required.
- **Additional information:** No dangerous substances are released.

7 Handling and storage

- **Handling**
 - **Information for safe handling:** No special measures required.
 - **Information about protection against explosions and fires:** No special measures required.
- **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.
- **Additional information:** The lists that were valid during the creation were used as basis.

- **Personal Protective Equipment**

- **General protective and hygienic measures**

The usual precautionary measures for handling chemicals should be followed.

- **Breathing equipment:** Not required.

- **Protection of hands:**



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

- **Eye protection:** Safety glasses

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

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Product name: Gram Diluent
(Gram Iodine (Unstabilized))

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9 Physical and chemical properties:**· General Information**

Form: Liquid
Color: Dark brown
Odor: Characteristic

· Change in condition Undetermined
· Melting point/Melting range: Not determined
· Boiling point/Boiling range: Not determined

· Flash point: Not applicable

· Auto igniting: Product is not self igniting.

· Danger of explosion: Product does not present an explosion hazard.

· Density: Not determined

· Solubility in / Miscibility with
Water: Soluble

10 Stability and reactivity

- Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- Materials to be avoided:** Incompatible material: strong oxidizers.
- Dangerous reactions** No dangerous reactions known
- Dangerous products of decomposition:** No dangerous decomposition products known.

11 Toxicological information

- Acute toxicity:**
- Primary irritant effect:**
 - on the skin:** No irritating effect.
 - on the eye:** No irritating effect.
- Sensitization:** No sensitizing effects known.
- Subacute to chronic toxicity:**
Target organs: lung, thyroid, bladder damage and central nervous system depression.
- Additional toxicological information:**
The product is not subject to OSHA classification according to internally approved calculation methods for preparations.
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

12 Ecological information:

- Ecotoxic effects:**
- Other information:**
The ecological effects have not been thoroughly investigated, but currently none have been identified.

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Printing date 01/11/2006

Reviewed on 11/24/2003

**Product name: Gram Diluent
(Gram Iodine (Unstabilized))**

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· **General notes:** Water hazard class 1 (Self-assessment): slightly hazardous for water.

13 Disposal considerations

- **Product:**
- **Recommendation**
Smaller quantities can be disposed of with solid waste.
This product is not considered a RCRA hazardous waste.
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.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- **DOT regulations:**
- **Hazard class:** -
- **Land transport ADR/RID (cross-border)**
- **ADR/RID class:** -
- **Maritime transport IMDG:**
- **IMDG Class:** -
- **Marine pollutant:** No
- **Air transport ICAO-TI and IATA-DGR:**
- **ICAO/IATA Class:** -

· **Transport/Additional information:**
If a dashed line appears in the Hazard Class section for the type of transportation, this indicates the product is not regulated for transportation. However, if a Hazard Class Number is listed the product is regulated.

15 Regulations

- **SARA Section 355 (extremely hazardous substances)**
None of the ingredients is listed.
- **SARA Section 313 (specific toxic chemical listings)**
None of the ingredients is listed.
- **TSCA (Toxic Substances Control Act)**

7681-11-0	potassium iodide
7553-56-2	iodine
- **California Proposition 65 - Chemicals known to cause cancer**
None of the ingredients is listed.

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**Material Safety Data Sheet**
acc. to ISO/DIS 11014

Printing date 01/11/2006

Reviewed on 11/24/2003

Product name: Gram Diluent
(Gram Iodine (Unstabilized))

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

None of the ingredients is listed.

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

None of the ingredients is listed.

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

None of the ingredients is 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)

None of the ingredients is listed.

· Product related hazard information:

Observe the general safety regulations when handling chemicals

The product is not subject to identification regulations pertaining to regulations on hazardous materials.

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**

USA

1 Identification of substance:

- **Product name:** Gram Iodine 100X
(Gram Iodine (Unstabilized))
- **Catalog number:** 212530
- **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**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**

7681-11-0	potassium iodide	53.0%
7553-56-2	iodine	27.0%

3 Hazards identification

· **Hazard description:**



Xn Harmful

- **Information pertaining to particular dangers for man and environment**
R 20/21 Harmful by inhalation and in contact with skin.
- **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 = 0
Reactivity = 0

4 First aid measures

- **General information**
Symptoms of poisoning may even occur after several hours; therefore provide medical observation for at least 48 hours after the accident.
- **After inhalation** Seek medical treatment in case of complaints.
- **After skin contact** Immediately wash with water and soap and rinse thoroughly.

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Product name: Gram Iodine 100X
(Gram Iodine (Unstabilized))

(Contd. of page 1)

- **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.
- **The following symptoms may occur:**
 - Nausea
 - Gastric or intestinal disorders.
- **Danger** Danger of impaired breathing.

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.
- **Special hazards caused by the material, its products of combustion or resulting gases:**
In certain fire conditions, traces of other toxic gases cannot be excluded.
- **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:** No special measures required.
- **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:** Ensure good ventilation/exhaustion at the workplace.
 - **Information about protection against explosions and fires:** No special measures required.
- **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.
 - Store away from reducing agents.
 - Do not store with ammonia and salts, aluminum, bromine trifluorides and trichlorides, chemically active metals, and carbides.
 - **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.

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Product name: Gram Iodine 100X
(Gram Iodine (Unstabilized))

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· Components with limit values that require monitoring at the workplace:

7553-56-2 iodine

PEL	Short-term value: C 1 mg/m ³ , C 0.1 ppm
REL	Short-term value: C 1 mg/m ³ , C 0.1 ppm
TLV	Short-term value: C 1 mg/m ³ , C 0.1 ppm

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Personal Protective Equipment**

· **General protective and hygienic measures**

The usual precautionary measures for handling chemicals should be followed.

· **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:	Dark brown
Odor:	Characteristic

· Change in condition	Undetermined
· Melting point/Melting range:	Not determined
· Boiling point/Boiling range:	Not determined

· **Flash point:** Not applicable

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

· **Danger of explosion:** Product does not present an explosion hazard.

· **Density:** Not determined

· **Solubility in / Miscibility with Water:** Soluble

· **pH-value:** 2.275 +/- 0.2

10 Stability and reactivity

· **Thermal decomposition / conditions to be avoided:**

No decomposition if used according to specifications.

· **Materials to be avoided:** Incompatible material: strong oxidizers.

· **Dangerous reactions** No dangerous reactions known

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Product name: Gram Iodine 100X
(Gram Iodine (Unstabilized))

(Contd. of page 3)

- **Dangerous products of decomposition:**
Iodine compounds
Sulfur oxides (SO_x)
Carbon monoxide (CO) and carbon dioxide (CO₂)
Nitrogen oxides (NO_x)

11 Toxicological information

- **Acute toxicity:**

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

7681-11-0 potassium iodide

Oral	LD50	1862 mg/kg (rat)
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- **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: lung, thyroid, bladder damage and central nervous system depression.

- **Additional toxicological information:**

Harmful

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 hazard class 1 (Self-assessment): slightly hazardous for water.

13 Disposal considerations

- **Product:**

- **Recommendation**

Must not be disposed of with solid waste.

Dispose of material in accordance with federal (40 CFR 261.3), state and local requirements.

This product is not considered a RCRA hazardous waste.

- **Uncleaned packagings:**

- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- **DOT regulations:**

- **Hazard class:** -

(Contd. on page 5)

Product name: Gram Iodine 100X
(Gram Iodine (Unstabilized))

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

· **Maritime transport IMDG:**
· **IMDG Class:** -
· **Marine pollutant:** No

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

15 Regulations

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

None of the ingredients is listed.

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

None of the ingredients is listed.

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

7681-11-0	potassium iodide
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7553-56-2	iodine
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· **California Proposition 65 - Chemicals known to cause cancer**

None of the ingredients is listed.

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

None of the ingredients is listed.

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

None of the ingredients is listed.

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

None of the ingredients is 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)**

None of the ingredients is listed.

· **Product related hazard information:**

Observe the general safety regulations when handling chemicals

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

· **Hazard symbols:**

Xn Harmful

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

iodine

potassium iodide

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Material Safety Data Sheet
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Reviewed on 11/24/2003

Product name: Gram Iodine 100X
(Gram Iodine (Unstabilized))

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· **Risk phrases:**

20/21 Harmful by inhalation and in contact with skin.

· **Safety phrases:**

9 Keep container in a well-ventilated place.

23 Do not breathe gas/fumes/vapour/spray.

36/37 Wear suitable protective clothing and gloves.

61 Avoid release to the environment. Refer to special instructions/Safety data sheets

16 Other information:

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

· **Contact:** Technical Service Representative

USA