

### 1 Identification of substance:

- **Product details:**
- **Product name:** Cinnamaldehyde Solution
- **Catalog number:** 225176
- **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:**

109-86-4	2-methoxyethanol	5.0%
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### 3 Hazards identification

- **Hazard description:**



T Toxic

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

R 60 May impair fertility  
 R 61 May cause harm to the unborn child  
 R 10 Flammable.  
 R 21/22 Harmful in contact with skin and if swallowed.  
 R 40 Limited evidence of a carcinogenic effect.

- **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 = 2  
 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** Supply fresh air; consult doctor in case of complaints.

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- **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 label.

### 5 Fire fighting measures

- **Suitable extinguishing agents**  
CO<sub>2</sub>, extinguishing powder 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:** Open and handle receptacle with care.
- **Information about protection against explosions and fires:**  
Keep ignition sources away - Do not smoke.  
Protect against electrostatic charges.  
Keep respiratory protective device available.
- **Storage**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Store away from oxidizing agents.
- **Further information about storage conditions:** Keep receptacle tightly sealed.

### 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:**

**109-86-4 2-methoxyethanol**

PEL	80 mg/m <sup>3</sup> , 25 ppm Skin
REL	0.3 mg/m <sup>3</sup> , 0.1 ppm Skin
TLV	16 mg/m <sup>3</sup> , 5 ppm Skin; BEI

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**64-19-7 acetic acid**

PEL	25 mg/m <sup>3</sup> , 10 ppm
REL	Short-term value: 37 mg/m <sup>3</sup> , 15 ppm Long-term value: 25 mg/m <sup>3</sup> , 10 ppm
TLV	Short-term value: 37 mg/m <sup>3</sup> , 15 ppm Long-term value: 25 mg/m <sup>3</sup> , 10 ppm

· **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.
- Store protective clothing separately.
- Avoid contact with the eyes and skin.

· **Breathing equipment:** Not required.

· **Protection of hands:**



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

· **Eye protection:** Safety glasses

**9 Physical and chemical properties:**

· **General Information**

<b>Form:</b>	Liquid
<b>Color:</b>	Yellow
<b>Odor:</b>	Characteristic

· **Change in condition**

<b>Melting point/Melting range:</b>	Not determined
<b>Boiling point/Boiling range:</b>	118°C (244°F)

· **Flash point:** 40°C (104°F)

· **Flammability (solid, gaseous)** Flammable.

· **Ignition temperature:** 310.0°C (590°F)

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

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

· **Density:** Not determined

· **Solubility in / Miscibility with**

**Water:** Soluble

· **pH-value:** Not applicable

· **Solvent content:**

**Organic solvents:** 7.5 %

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· **Solids content:** 92.5 %**10 Stability and reactivity**

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

**11 Toxicological information**· **Acute toxicity:**· **LD/LC50 values that are relevant for classification:****109-86-4 2-methoxyethanol**

Oral	LD50	3400 mg/kg (rat)
Dermal	LD50	2000 mg/kg (rbt)
Inhalative	LC50/4 h	1500 mg/l (rat)

· **Primary irritant effect:**

- **on the skin:** No irritating effect.
- **on the eye:** No irritating effect.
- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:**

Toxic

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

This product or product container contains dry natural rubber latex.

**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.  
Must adhere to state and federal regulations.  
Disposal must be made according to the regulations found in 40 CFR 261.  
This product is not considered a RCRA hazardous waste.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to state and federal regulations.

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· **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:** -

### 15 Regulations

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

None of the ingredients is listed.

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

109-86-4	2-methoxyethanol
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· **TSCA (Toxic Substances Control Act)**

109-86-4	2-methoxyethanol
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64-19-7	acetic acid
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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**

109-86-4	2-methoxyethanol
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· **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.

· **MAK (German Maximum Workplace Concentration)**

None of the ingredients is listed.

· **Product related hazard informations:**

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

· **Hazard symbols:**

T Toxic

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

2-methoxyethanol

**· Risk phrases:**

60 May impair fertility

61 May cause harm to the unborn child

10 Flammable.

21/22 Harmful in contact with skin and if swallowed.

40 Limited evidence of a carcinogenic effect.

**· Safety phrases:**

53 Avoid exposure - obtain special instructions before use.

1/2 Keep locked up and out of the reach of children.

36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

45 In case of accident or if you feel unwell, seek medical advice immediately.

**· National regulations****· Technical instructions (air):**

Class	Share in %
II	7.5

**16 Other information:**

To the best of our knowledge, the information contained herein is accurate. However, neither BD 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**