

1 Identification of the substance/mixture and of the company/undertaking

- **Product name:** 3-Cyano-7-Hydroxycoumarin
- **Catalog number:** 451015
- **Manufacturer/Supplier:**
BD Biosciences, Discovery Labware
6 Henshaw Street
Woburn, MA 01801
Tel: 800.334.5229
email: labware@bd.com
- **Information department:** Technical Services
- **Emergency information:**
In case of a chemical emergency, spill, fire, exposure, or accident contact BD Biosciences Discovery Labware at 800.334.5229, or ChemTrec at 800.424.9300.

2 Composition/information on ingredients

- **Chemical characterization:**
- **CAS No. Description:**
19088-73-4
3-Cyanoumbelliferone

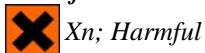
3 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**

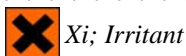


- H315 Causes skin irritation.
- H335 May cause respiratory irritation.
- H303 May be harmful if swallowed.
- H313 May be harmful in contact with skin.
- H333 May be harmful if inhaled.
- H320 Causes eye irritation.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



- R20/21/22: Harmful by inhalation, in contact with skin and if swallowed.



- R36/37/38: Irritating to eyes, respiratory system and skin.

- **Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
- **Hazard pictograms**



- **Signal word** Warning

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· Hazard-determining components of labelling:

3-Cyanoumbelliferone

· Hazard statements

May be harmful if swallowed.

May be harmful in contact with skin.

May be harmful if inhaled.

Causes skin irritation.

Causes eye irritation.

May cause respiratory irritation.

· Precautionary statements

Avoid breathing dust/fume/gas/mist/vapours/spray.

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

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

Take off contaminated clothing and wash before reuse.

Store locked up.

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

· Labelling according to EU guidelines:

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

· Code letter and hazard designation of product:

Xn Harmful

· Risk phrases:

20/21/22 Harmful by inhalation, in contact with skin and if swallowed.

36/37/38 Irritating to eyes, respiratory system and skin.

· Safety phrases:

26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

36 Wear suitable protective clothing.

· Classification system**· NFPA ratings (scale 0-4)**

Health = 2

Flammability = 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 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**

If swallowed, rinse mouth with water (only if the person is conscious)

Seek immediate medical advice.

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Reviewed on 11/11/2010

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· **Information for doctor** Show the product label or this MSDS.

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5 Firefighting measures

- **Suitable extinguishing agents**
CO₂, ABC multipurpose dry chemical or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Protective equipment:** Wear self-contained respiratory protective device.

6 Accidental release measures

- **Person-related safety precautions:**
Ensure adequate ventilation
Avoid formation of dust.
- **Measures for environmental protection:**
Wipe up with damp sponge or mop.
Do not allow product to reach sewage system or any water course.
- **Measures for cleaning/collecting:**
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **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.
Prevent formation of dust.
- **Information about protection against explosions and fires:** No special measures required.
- **Storage**
- **Requirements to be met by storerooms and receptacles:** 18 - 25C
- **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/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.
- **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.

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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.

Filter N95 (US) or P1 (EN 143).

· **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**

· **Appearance:**

Form: Solid.

Color: Yellow

· **Odor:** Characteristic

· **Change in condition**

Melting point/Melting range: Not determined

Boiling point/Boiling range: Not determined

· **Flash point:** Not applicable

· **Flammability (solid, gaseous)** Product is not flammable.

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

· **Vapor pressure:** Not applicable

· **Density:** Not determined

· **Solubility in / Miscibility with**

Water: Insoluble

· **pH-value:** Not applicable

· **Formula Weight** 187.15

· **Additional information** This product is soluble in methanol.

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:**

Nitrogen oxides (NO_x)

Carbon monoxide (CO) and carbon dioxide (CO₂)

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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.
- **Additional toxicological information:**

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

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12 Ecological information

- **Ecotoxicological effects:**
- **Other information:**

The ecological effects have not been thoroughly investigated, but currently none have been identified.

13 Disposal considerations

- **Product:**
- **Recommendation**

Must not be disposed of with solid waste.
Dispose of material in accordance with federal (40 CFR 261), state and local requirements.
This product is not considered a RCRA hazardous waste.
- **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:** -
- **UN "Model Regulation":** -

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

Substance is not listed.

· SARA Section 313 (specific toxic chemical listings)

Substance is not listed.

· TSCA (Toxic Substances Control Act)

Substance is not listed.

· California Proposition 65 - Chemicals known to cause cancer

Substance is not listed.

· Chemicals known to cause reproductive toxicity for females:

Substance is not listed.

· Chemicals known to cause reproductive toxicity for males:

Substance is not listed.

· Chemicals known to cause developmental toxicity:

Substance is not listed.

· Carcinogenic 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.

· 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 cannot guarantee that these are the only hazards that exist.

· Department issuing MSDS: Safety and Environment Department**· Contact:** Technical Service Representative**· 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)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

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Material Safety Data Sheet
acc. to ISO/DIS 11014

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ICAO: International Civil Aviation Organization
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
ACGIH: American Conference of Governmental Industrial Hygienists
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)

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USA