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1 Identification

· Product identifier**· Product name:** BD™ FACSClean Solution**· Catalog number:** 340345**· Relevant identified uses of the substance or mixture and uses advised against****· Sector of Use** SU24 Scientific research and development**· Details of the supplier of the safety data sheet****· Manufacturer/Supplier:**

Becton, Dickinson and Company

BD Biosciences

2350 Qume Drive

San Jose, CA 95131 USA

Tel 877.232.8995

bdbiosciences.com

· Information department: Technical Services**· Emergency telephone number:**

In case of a chemical emergency, spill, fire, or exposure, call BD Biosciences at (877)232-8995, or ChemTrec at (800)424-9300.

2 Hazard(s) identification

· Classification of the substance or mixture

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2A H319 Causes serious eye irritation.

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

Xi; Irritant

R36/38: Irritating to eyes and skin.

· Classification system:

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

· Label elements**· GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).**· Hazard pictograms** GHS07**· Signal word** Warning**· Hazard statements**

Causes skin irritation.

Causes serious eye irritation.

· Precautionary statements

Wear protective gloves / eye protection.

Wear protective clothing.

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

If skin irritation occurs: Get medical advice/attention.

If eye irritation persists: Get medical advice/attention.

IF ON SKIN: Wash with plenty of water.

(Contd. on page 2)

USA

Product name: BD™ FACSClean Solution

(Contd. of page 1)

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



Health = 1
 Flammability = 0
 Reactivity = 0

- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**

7681-52-9	sodium hypochlorite, solution C R34; N R50 R31 Skin Corr. 1B, H314; Aquatic Acute 1, H400	1.0%
1310-73-2	sodium hydroxide C R35 Skin Corr. 1A, H314	0.8%

4 First-aid measures

- **Description of 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 skin contact** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact** Flush immediately with water for 15 minutes, and consult a doctor.
- **After swallowing** Seek immediate medical advice.
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
 No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents**
 CO₂, ABC multipurpose dry chemical or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

USA

(Contd. on page 3)

Product name: BD™ FACSClean Solution

(Contd. of page 2)

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
The usual precautionary measures for handling chemicals should be followed.
See Section 8 for information on personal protection equipment.
- **Environmental precautions:** No special measures required.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders).
Ensure adequate ventilation.
Wipe up with damp sponge or mop.
- **Reference to other sections**
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

- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
 - **Storage**
 - **Requirements to be met by storerooms and receptacles:** 20-25 °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.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

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

Components with limit values that require monitoring at the workplace:**7681-52-9 sodium hypochlorite, solution**WEEL () Short-term value: 2 mg/m³· **Additional information:** The lists that were valid during the creation were used as basis.

- **Exposure controls**
 - **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:** Not required.

(Contd. on page 4)

Product name: BD™ FACSClean Solution

(Contd. of page 3)

· 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

· Information on basic physical and chemical properties
· General Information
· Appearance:

· Form:	Liquid
· Color:	Clear
· Odor:	Characteristic
· Odour threshold:	Not determined

· **pH-value:** Not determined

· Change in condition

· Melting point/Melting range:	Not determined
· Boiling point/Boiling range:	Not determined

· **Flash point:** Not applicable

· **Flammability (solid, gaseous)** Not applicable

· Ignition temperature:

· **Decomposition temperature:** Not determined

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

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

· Explosion limits:

· Lower:	Not determined
· Upper:	Not determined

· **Vapor pressure:** Not applicable

· **Density at 20 °C (68 °F):** 1.002 g/cm³ (8.362 lbs/gal)

· Relative density	Not determined
· Vapour density	Not determined
· Evaporation rate	Not determined

· Solubility in / Miscibility with

· **Water:** Soluble

· **Partition coefficient (n-octanol/water):** Not determined

(Contd. on page 5)

Product name: BD™ FACSClean Solution

(Contd. of page 4)

- **Viscosity:**
 - *dynamic:* Not determined
 - *kinematic:* Not determined
- **Solvent content:**
 - *Organic solvents:* 0.0 %
 - *Water:* 98.2 %
- **Other information** No further relevant information available.

10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
 - **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** Incompatible material: strong oxidizers.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **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:**
 - **Carcinogenic categories**

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

None of the ingredients is listed.

 · **NTP (National Toxicology Program)**

None of the ingredients is listed.

 · **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

12 Ecological information

- **Toxicity**
 - **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
 - **Other information:**
 - The ecological effects have not been thoroughly investigated, but currently none have been identified.

(Contd. on page 6)

Product name: BD™ FACSClean Solution

(Contd. of page 5)

- **Additional ecological information:**
 - **General notes:** Water hazard class 2 (Self-assessment): hazardous for water.
- **Results of PBT and vPvB assessment**
 - **PBT:** Not applicable.
 - **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
 - **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

· UN-Number	
· DOT, ADR, ADN, IMDG, IATA	Void
· UN proper shipping name	
· DOT, ADR, ADN, IMDG, IATA	Void
· Transport hazard class(es)	
· DOT, ADR, ADN, IMDG, IATA	
· Class	Void
· Packing group	
· DOT, ADR, IMDG, IATA	Void
· Environmental hazards:	
· Marine pollutant:	No
· Special precautions for user	Not applicable.
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· UN "Model Regulation":	-

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**

· 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.

(Contd. on page 7)

Product name: BD™ FACSClean Solution

(Contd. of page 6)

· TSCA (Toxic Substances Control Act)

All ingredients are listed.

· California Proposition 65 - Chemicals known to cause cancer

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

· Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

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

None of the ingredients is listed.

· GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).**· Hazard pictograms** GHS07**· Signal word** Warning**· Hazard statements**

Causes skin irritation.

Causes serious eye irritation.

· Precautionary statements

Wear protective gloves / eye protection.

Wear protective clothing.

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

Continue rinsing.

If skin irritation occurs: Get medical advice/attention.

If eye irritation persists: Get medical advice/attention.

IF ON SKIN: Wash with plenty of water.

· National regulations**· Water hazard class:** Water hazard class 2 (Self-assessment): hazardous for water.**· 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)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

(Contd. on page 8)



Safety Data Sheet
acc. to ISO/11014:2009

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(Contd. of page 7)

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A

Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A

Aquatic Acute 1: Hazardous to the aquatic environment - AcuteHazard, Category 1

USA