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SAFETY DATA SHEET

1. Identification

Product identifier

Product No.:	Product name:	Common name(s), synonym(s)
660586	BD™ Extended Flow Cell Clean Solution	

Other means of identification

SDS number: 088100200357

Recommended use and restriction on use

Recommended use: Reserved for industrial and professional use.
Restrictions on use: None known.

Manufacturer/Importer/Supplier/Distributor Information

Manufacturer

Company Name:	Becton, Dickinson and Company - BD Biosciences
Address:	2350 Qume Drive 95131 San Jose, CA USA
Telephone:	1 877 232 8995 or 1 800 424 9300
Fax:	
Contact Person:	Technical Services
E-mail:	ResearchApplications@bd.com or ClinicalApplications@bd.com

Emergency telephone number: ChemTrec 1 800 424 9300

2. Hazard(s) identification

Hazard Classification

Not classified

Label Elements

Hazard Symbol: No symbol

Signal Word: No signal word.

Hazard Statement: Not applicable
Precautionary Statements Not applicable

Other hazards which do not result in GHS classification: None.

3. Composition/information on ingredients

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Mixtures

Chemical Identity	Common name and synonyms	CAS number	Content in percent (%)*
Ethanol		64-17-5	4.7184%
Methanol		67-56-1	0.2483%

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

General information: Get medical attention if symptoms occur.

Ingestion: Call a physician or poison control center immediately. Only induce vomiting at the instruction of medical personnel. Never give anything by mouth to an unconscious person.

Inhalation: Provide fresh air, warmth and rest, preferably in comfortable upright sitting position.

Skin Contact: Wash contact areas with soap and water. Remove contaminated clothing. Launder contaminated clothing before reuse.

Eye contact: Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses.

Most important symptoms/effects, acute and delayed

Symptoms: No data available.

Indication of immediate medical attention and special treatment needed

Treatment: No data available.

5. Fire-fighting measures

General Fire Hazards: Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate. Use water spray to keep fire-exposed containers cool.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable extinguishing media: Not applicable

Specific hazards arising from the chemical: Fire or excessive heat may produce hazardous decomposition products.

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Special protective equipment and precautions for firefighters

Special fire fighting procedures:	No unusual fire or explosion hazards noted.
Special protective equipment for fire-fighters:	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures:	Contact local authorities in case of spillage to drain/aquatic environment. Ensure suitable personal protection (including respiratory protection) during removal of spillages in a confined area.
Methods and material for containment and cleaning up:	Absorb spillage with suitable absorbent material. Prevent runoff from entering drains, sewers, or streams. See Section 8 of the SDS for Personal Protective Equipment. For waste disposal, see section 13 of the SDS.
Environmental Precautions:	Avoid release to the environment.

7. Handling and storage

Precautions for safe handling:	When using do not eat, drink or smoke. Read and follow manufacturer's recommendations. Use personal protective equipment as required.
Conditions for safe storage, including any incompatibilities:	Store in a cool, dry place. Keep container tightly closed.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

Chemical Identity	Type	Exposure Limit Values	Source
Ethanol	TWA	1,000 ppm 1,900 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	TWA	1,000 ppm 1,900 mg/m3	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)
	AN ESL	1,000 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (12 2010)
	ST ESL	10,000 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (12 2010)
	AN ESL	1,880 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (12 2010)
	ST ESL	18,800 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (12 2010)
	TWA PEL	1,000 ppm 1,900 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (08

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				2010)
	STEL	1,000 ppm		US. ACGIH Threshold Limit Values (12 2010)
	REL	1,000 ppm	1,900 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	PEL	1,000 ppm	1,900 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Methanol	STEL	250 ppm	325 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	TWA	200 ppm	260 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	STEL	250 ppm	325 mg/m3	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)
	TWA	200 ppm	260 mg/m3	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)
	ST ESL		2,620 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (12 2010)
	AN ESL		200 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (12 2010)
	AN ESL		262 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (12 2010)
	ST ESL		2,000 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (12 2010)
	STEL	250 ppm	325 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (08 2010)
	TWA PEL	200 ppm	260 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (08 2010)
	Ceiling	1,000 ppm		US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (08 2010)
	STEL	250 ppm		US. ACGIH Threshold Limit Values (12 2010)
	TWA	200 ppm		US. ACGIH Threshold Limit Values (12 2010)
	REL	200 ppm	260 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	STEL	250 ppm	325 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	PEL	200 ppm	260 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)

Biological Limit Values

Chemical Identity	Exposure Limit Values	Source
Methanol (methanol: Sampling time: End of shift.)	15 mg/l (Urine)	ACGIH BEI (03 2013)

Appropriate Engineering Controls

No special requirements under ordinary conditions of use and with adequate ventilation.

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Individual protection measures, such as personal protective equipment

General information:	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing to remove contaminants. Discard contaminated footwear that cannot be cleaned.
Eye/face protection:	Wear safety glasses with side shields (or goggles).
Skin Protection	
Hand Protection:	Chemical resistant gloves Suitable gloves can be recommended by the glove supplier. Wash hands after contact.
Other:	Wear a lab coat or similar protective clothing.
Respiratory Protection:	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.
Hygiene measures:	Observe good industrial hygiene practices.

9. Physical and chemical properties

Appearance

Physical state:	liquid
Form:	Aqueous Solution
Color:	Colorless
Odor:	Characteristic
Odor threshold:	No data available.
pH:	No data available.
Melting point/freezing point:	No data available.
Initial boiling point and boiling range:	No data available.
Flash Point:	No data available.
Evaporation rate:	No data available.
Flammability (solid, gas):	No data available.
Upper/lower limit on flammability or explosive limits	
Flammability limit - upper (%):	No data available.
Flammability limit - lower (%):	No data available.
Explosive limit - upper (%):	No data available.
Explosive limit - lower (%):	No data available.
Vapor pressure:	No data available.
Vapor density:	No data available.
Relative density:	No data available.
Solubility(ies)	
Solubility in water:	No data available.

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Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Auto-ignition temperature:	No data available.
Decomposition temperature:	No data available.
Viscosity:	No data available.

10. Stability and reactivity

Reactivity:	Stable under normal temperature conditions and recommended use.
Chemical Stability:	Material is stable under normal conditions.
Possibility of hazardous reactions:	Not determined.
Conditions to avoid:	Avoid exposure to high temperatures or direct sunlight.
Incompatible Materials:	Metals. Water reactive material.
Hazardous Decomposition Products:	Stable; however, may decompose if heated.

11. Toxicological information

General information: No data on possible toxicity effects have been found.

Information on likely routes of exposure

Ingestion:	No harmful effects expected in amounts likely to be ingested by accident.
Inhalation:	Limited inhalation hazard at normal work temperatures.
Skin Contact:	Negligible irritation to skin at ambient temperatures.
Eye contact:	Elevated temperatures or mechanical action may form vapors, mist, or fumes which may be irritating to the eyes, nose, throat, or lungs.

Symptoms related to the physical, chemical and toxicological characteristics

Ingestion:	No data available.
Inhalation:	No data available.
Skin Contact:	No data available.
Eye contact:	No data available.

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Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral
Product: ATEmix: 40,273.86 mg/kg

Dermal
Product: ATEmix: 120,821.59 mg/kg

Inhalation
Product: ATEmix: 1,208.22 mg/l

Repeated dose toxicity
Product: No data available.

Specified substance(s):

Ethanol	Based on available data, the classification criteria are not met. LOAEL (Rat(Female, Male), Inhalation, 7,318 - 7,496 h): 1.3 mg/l Inhalation Read-across from supporting substance (structural analogue or surrogate), Weight of Evidence study NOAEL (Guinea pig, Inhalation, 10.5 Weeks): 3,000 ppm(m) Inhalation Experimental result, Supporting study LOAEL (Rat(Male), Inhalation, 1 - 6 Weeks): 13.3 mg/l Inhalation Read-across from supporting substance (structural analogue or surrogate), Supporting study LOAEL (Monkey, Inhalation, 5 - 20 d): 3.99 mg/l Inhalation Read-across from supporting substance (structural analogue or surrogate), Supporting study
Methanol	NOAEL (Rat(Female, Male), Inhalation): 6.66 mg/l Inhalation Experimental result, Weight of Evidence study LOAEL (Rat(Male), Inhalation, 1 - 6 Weeks): 13.3 mg/l Inhalation Experimental result, Supporting study NOAEL (Rat(Male), Inhalation, 1 - 6 Weeks): 2.65 mg/l Inhalation Experimental result, Supporting study NOAEL (Rat(Male), Inhalation, 1 - 6 Weeks): 0.26 mg/l Inhalation Experimental result, Supporting study NOAEL (Rat(Female, Male), Inhalation, 7,318 - 7,496 h): 0.13 mg/l Inhalation Experimental result, Weight of Evidence study

Skin Corrosion/Irritation
Product: No data available.

Specified substance(s):

Ethanol	in vivo (Rabbit): Not irritant Experimental result, Key study

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Methanol	in vivo (Rabbit): Not irritant Experimental result, Key study

Serious Eye Damage/Eye Irritation

Product:	No data available.
Specified substance(s):	
Ethanol	in vivo (Rabbit, 24 - 72 hrs): Not irritating EU
Methanol	in vivo (Rabbit, 24 - 72 hrs): Not irritating

Respiratory or Skin Sensitization

Product:	No data available.
Specified substance(s):	
Ethanol	Based on available data, the classification criteria are not met. Skin sensitization:, in vivo (Guinea pig): Non sensitising
Methanol	Skin sensitization:, in vivo (Guinea pig): Non sensitising

Carcinogenicity

Product:	No data available.
Specified substance(s):	
Ethanol	Based on available data, the classification criteria are not met.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:
No carcinogenic components identified

US. National Toxicology Program (NTP) Report on Carcinogens:
No carcinogenic components identified

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):
No carcinogenic components identified

Germ Cell Mutagenicity

In vitro

Product:	No data available.
Specified substance(s):	
Ethanol	Based on available data, the classification criteria are not met.

In vivo

Product:	No data available.
Specified substance(s):	
Ethanol	Based on available data, the classification criteria are not met.

Reproductive toxicity

Product:	No data available.

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Specified substance(s):

Ethanol	Based on available data, the classification criteria are not met.

Specific Target Organ Toxicity - Single Exposure

Product:	No data available.
Specified substance(s):	
Ethanol	Based on available data, the classification criteria are not met.
Methanol	Oral: Nervous System - Causes damage to organs.

Specific Target Organ Toxicity - Repeated Exposure

Product:	No data available.
Specified substance(s):	
Ethanol	Based on available data, the classification criteria are not met.

Aspiration Hazard

Product:	No data available.

Other effects: No data available.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish
Product: No negative effects on the aquatic environment are known.

Aquatic Invertebrates
Product: No negative effects on the aquatic environment are known.

Chronic hazards to the aquatic environment:

Fish
Product: No negative effects on the aquatic environment are known.

Aquatic Invertebrates
Product: No negative effects on the aquatic environment are known.

Toxicity to Aquatic Plants
Product: No negative effects on the aquatic environment are known.

Persistence and Degradability

Biodegradation
Product: Expected to be readily biodegradable.

BOD/COD Ratio
Product: No data available.

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Bioaccumulative potential

Bioconcentration Factor (BCF)

Product: No data available.

Specified substance(s):

Ethanol	Potential to bioaccumulate is low. Cyprinus carpio, Bioconcentration Factor (BCF): 4.5 Aquatic sediment Read-across from supporting substance (structural analogue or surrogate), Supporting study Cyprinus carpio, Bioconcentration Factor (BCF): 3 Aquatic sediment Read-across from supporting substance (structural analogue or surrogate), Supporting study Leuciscus idus, Bioconcentration Factor (BCF): 0.2 Aquatic sediment Read-across from supporting substance (structural analogue or surrogate), Not specified Cyprinus carpio, Bioconcentration Factor (BCF): 1 Aquatic sediment Read-across from supporting substance (structural analogue or surrogate), Supporting study
Methanol	Leuciscus idus, Bioconcentration Factor (BCF): < 10 Aquatic sediment Experimental result, Supporting study Cyprinus carpio, Bioconcentration Factor (BCF): 4.5 Aquatic sediment Experimental result, Supporting study Cyprinus carpio, Bioconcentration Factor (BCF): 1 Aquatic sediment Experimental result, Supporting study Cyprinus carpio, Bioconcentration Factor (BCF): 3 Aquatic sediment Experimental result, Supporting study Green algae (Chlorella fusca vacuolata), Bioconcentration Factor (BCF): 28,400 (Static)

Partition Coefficient n-octanol / water (log Kow)

Product: No data available.

Specified substance(s):

Ethanol	Log Kow: -0.31
Methanol	Log Kow: -0.77

Mobility in soil: No data available.

Known or predicted distribution to environmental compartments

Ethanol	soil - Very mobile liquid
Methanol	No data available.

Other adverse effects: The product is not expected to be hazardous to the environment.

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13. Disposal considerations

General information: Dispose of waste and residues in accordance with local authority requirements.

Disposal instructions: Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Contaminated Packaging: No data available.

14. Transport information

DOTUN Number: Not regulated.
UN Proper Shipping Name: Not regulated.
Transport Hazard Class(es)
Class: Not regulated.
Label(s): Not regulated.
Packing Group: Not regulated.
Marine Pollutant: Not regulated.
Limited quantity Not regulated.
Excepted quantity Not regulated.

Special precautions for user: Not regulated.

IMDG
UN Number: Not regulated.
UN Proper Shipping Name: Not regulated.
Transport Hazard Class(es)
Class: Not regulated.
Subsidiary risk: Not regulated.
EmS No.: Not regulated.
Packing Group: Not regulated.
Environmental Hazards
Marine Pollutant: Not regulated.

Special precautions for user: Not regulated.

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IATA

UN Number:	Not regulated.
Proper Shipping Name:	Not regulated.
Transport Hazard Class(es):	
Class:	Not regulated.
Subsidiary risk:	Not regulated.
Packing Group:	Not regulated.
Environmental Hazards	
Marine pollutant:	Not regulated.
Special precautions for user:	Not regulated.

15. Regulatory information

US Federal Regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
None present or none present in regulated quantities.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):

Chemical Identity	Reportable quantity
Ethanol	100 lbs.
Methanol	5000 lbs.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Not classified
Not classified

SARA 302 Extremely Hazardous Substance
None present or none present in regulated quantities.

SARA 304 Emergency Release Notification

Chemical Identity	Reportable quantity
Ethanol	100 lbs.
Methanol	5000 lbs.

SARA 311/312 Hazardous Chemical

Chemical Identity	Threshold Planning Quantity
Ethanol	10000 lbs
Methanol	10000 lbs

SARA 313 (TRI Reporting)
None present or none present in regulated quantities.

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Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)
None present or none present in regulated quantities.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):
None present or none present in regulated quantities.

US State Regulations

US. California Proposition 65

WARNING: This product can expose you to chemicals including, Ethanol, which is [are] known to the State of California to cause cancer and birth defects or other reproductive harm.
This product can expose you to chemicals including, Methanol, which is [are] known to the State of California to cause birth defects or other reproductive harm.
For more information go to www.P65Warnings.ca.gov.

US. New Jersey Worker and Community Right-to-Know Act

Chemical Identity
Ethanol

US. Massachusetts RTK - Substance List

Chemical Identity
Ethanol

US. Pennsylvania RTK - Hazardous Substances

Chemical Identity
Ethanol

US. Rhode Island RTK

Chemical Identity
Ethanol

16.Other information, including date of preparation or last revision

Issue Date:	03/29/2019
Version #:	1.1
Revision Information:	
Source of information:	European Chemicals Agency (ECHA): Information on Chemicals.
Further Information:	No data available.

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