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SAFETY DATA SHEET

1. Identification

Product identifier

Product No.:	Product name:	Common name(s), synonym(s)
371163	BD E-Z Scrub™ surgical scrub brush impregnated with 3% chloroxylenol(PCMX).	

Other means of identification

SDS number: 088100001711

Recommended use and restriction on use

Recommended use: Skin Antiseptic
Restrictions on use: None known.

Manufacturer/Importer/Supplier/Distributor Information

Manufacturer

Company Name: Becton Dickinson
Address: 9450 South State Street
Sandy, UT 84070 USA
Telephone: 1-801-565-2300 (US 24 hour)
Fax:
Contact Person: Regulatory Affairs

Emergency telephone number: ChemTrec 1 800 424 9300

Chemtrec +001-703-527-3887 (International)

2. Hazard(s) identification

Hazard Classification

Health Hazards

Serious Eye Damage/Eye Irritation	Category 2A
Skin sensitizer	Category 1

Environmental Hazards

Acute hazards to the aquatic environment	Category 2

Label Elements

Hazard Symbol:

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Signal Word: Warning

Hazard Statement:
H317: May cause an allergic skin reaction.
H319: Causes serious eye irritation.
H401: Toxic to aquatic life.

Precautionary Statements

Prevention:
P261: Avoid breathing dust/fume/gas/mist/vapors/spray.
P272: Contaminated work clothing should not be allowed out of the workplace.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P273: Avoid release to the environment.

Response:
P302+P352: IF ON SKIN: Wash with plenty of water.
P333+P313: If skin irritation or rash occurs: Get medical advice/attention.
P363: Wash contaminated clothing before reuse.

Disposal:
P501: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

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

3. Composition/information on ingredients

Mixtures

Chemical Identity	Common name and synonyms	CAS number	Content in percent (%)*
Phenol, 4-chloro-3,5-dimethyl-		88-04-0	3.3%

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

4. First-aid measures

General information: If medical advice is needed, have product container or label at hand. Get medical attention if symptoms occur. Causes skin and eye irritation. May cause an allergic skin reaction.

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Ingestion:	If swallowed, rinse mouth with water (only if the person is conscious). Do NOT induce vomiting. Get medical attention immediately.
Inhalation:	Provide fresh air, warmth and rest, preferably in comfortable upright sitting position. Get medical attention if symptoms persist.
Skin Contact:	Wash off promptly and flush contaminated skin with water. Promptly remove clothing if soaked through and flush skin with water. Get medical attention if symptoms occur. Wash contaminated clothing before reuse.
Eye contact:	Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention promptly if symptoms occur after washing.

Most important symptoms/effects, acute and delayed

Symptoms:	Symptoms may be delayed.
Hazards:	Causes skin and eye irritation. May cause an allergic skin reaction.

Indication of immediate medical attention and special treatment needed

Treatment:	Wash off promptly and flush contaminated skin with water. Promptly remove clothing if soaked through and flush skin with water. If in eyes, hold eyes open, flood with water for at least 15 minutes and see a doctor.

5. Fire-fighting measures

General Fire Hazards:	Wear self-contained breathing apparatus and protective clothing. Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate. Use water to keep fire exposed containers cool and disperse vapors.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media:	Water spray, fog, CO2, dry chemical, or alcohol resistant foam.
Unsuitable extinguishing media:	Avoid water in straight hose stream; will scatter and spread fire.
Specific hazards arising from the chemical:	Fire or excessive heat may produce hazardous decomposition products.

Special protective equipment and precautions for firefighters

Special fire fighting procedures:	No unusual fire or explosion hazards noted.

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Special protective equipment for fire-fighters: Wear self-contained breathing apparatus and protective clothing. 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: See Section 8 of the SDS for Personal Protective Equipment. Ensure suitable personal protection (including respiratory protection) during removal of spillages in a confined area. Contact local authorities in case of spillage to drain/aquatic environment.

Methods and material for containment and cleaning up: Stop leak if possible without any risk. 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: Eye wash facilities and emergency shower must be available when handling this product. Do not get in eyes, on skin, on clothing. Wash promptly with soap and water if skin becomes contaminated. 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 at room temperature (20-25°C). Avoid excessive heat (40°C). Store isolated from oxidizers, ignition sources, and explosives. Consult local fire codes for additional storage information. Store separated from: Oxidizing material. Store in tightly closed original container in a dry, cool and well-ventilated place.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

Chemical Identity	Type	Exposure Limit Values	Source
Hydrochloric acid	Ceiling	5 ppm 7 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended (1989)
	Ceiling	5 ppm 7 mg/m3	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A, as amended (06 2008)
	ST ESL	130 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality), as amended (12 2010)
	AN ESL	5.7 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality), as amended (12 2010)
	AN ESL	8.4 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality), as amended (12 2010)
	ST ESL	190 µg/m3	US. Texas. Effects Screening Levels (Texas

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				Commission on Environmental Quality), as amended (12 2010)
	Ceiling	5 ppm	7 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants, as amended (08 2010)
	Ceiling	2 ppm		US. ACGIH Threshold Limit Values, as amended (12 2010)
	Ceil_Time	5 ppm	7 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards, as amended (2005)
	Ceiling	5 ppm	7 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended (02 2006)
	IDLH	50 ppm		US. NIOSH. Immediately Dangerous to Life or Health (IDLH) Values, as amended (10 2017)
Sodium hydroxide (Na(OH))	Ceiling		2 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended (1989)
	Ceiling		2 mg/m3	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A, as amended (06 2008)
Sodium hydroxide (Na(OH)) - Particulate.	AN ESL		2 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality), as amended (07 2011)
	ST ESL		20 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality), as amended (07 2011)
Sodium hydroxide (Na(OH))	Ceiling		2 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants, as amended (08 2010)
	Ceiling		2 mg/m3	US. ACGIH Threshold Limit Values, as amended (12 2010)
	Ceil_Time		2 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards, as amended (2005)
	PEL		2 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended (02 2006)
	IDLH		10 mg/m3	US. NIOSH. Immediately Dangerous to Life or Health (IDLH) Values, as amended (10 2017)
2-Propanol	TWA	400 ppm	980 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended (1989)
	STEL	500 ppm	1,225 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended (1989)
	TWA	400 ppm	980 mg/m3	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)
	STEL	500 ppm	1,225 mg/m3	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)
	AN ESL		200 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality), as amended (12 2010)
	ST ESL		2,000 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality), as amended (12 2010)
	AN ESL		492 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality), as amended (12 2010)
	ST ESL		4,920 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality), as amended (12 2010)
	TWA PEL	400 ppm	980 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (08 2010)
	STEL	500 ppm	1,225 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (08 2010)
	TWA	200 ppm		US. ACGIH Threshold Limit Values, as amended (12 2010)

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	STEL	400 ppm	US. ACGIH Threshold Limit Values, as amended (12 2010)
	STEL	500 ppm 1,225 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards, as amended (2005)
	REL	400 ppm 980 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards, as amended (2005)
	PEL	400 ppm 980 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended (02 2006)
	LEL	2.0 %	US. NIOSH. Immediately Dangerous to Life or Health (IDLH) Values, as amended (10 2017)
	IDLH	2,000 ppm	US. NIOSH. Immediately Dangerous to Life or Health (IDLH) Values, as amended (10 2017)
Cellulose - Respirable fraction.	TWA	5 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended (1989)
Cellulose - Total dust.	TWA	15 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended (1989)
Cellulose - Respirable fraction.	TWA	5 mg/m3	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A, as amended (06 2008)
Cellulose - Total dust.	TWA	15 mg/m3	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A, as amended (06 2008)
Cellulose - Particulate.	ST ESL	50 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality), as amended (12 2010)
	AN ESL	5 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality), as amended (12 2010)
Cellulose	TWA	10 mg/m3	US. ACGIH Threshold Limit Values, as amended (12 2010)
Cellulose - Respirable.	REL	5 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards, as amended (2005)
Cellulose - Total	REL	10 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards, as amended (2005)
Cellulose - Respirable fraction.	PEL	5 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended (02 2006)
Cellulose - Total dust.	PEL	15 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended (02 2006)

Biological Limit Values

Chemical Identity	Exposure Limit Values	Source
2-Propanol (acetone: Sampling time: End of shift at end of work week.)	40 mg/l (Urine)	ACGIH BEI (03 2013)

Appropriate Engineering Controls Adequate ventilation should be provided whenever the material is heated or mists are generated. Provide eyewash station and safety shower.

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).

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Hand Protection:	Nitrile gloves Use suitable protective gloves if risk of skin contact.
Other:	Wear appropriate clothing to prevent repeated or prolonged skin contact.
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:	Do not eat, drink or smoke when using the product. Wash promptly if skin becomes contaminated. Wash at the end of each work shift and before eating, smoking and using the toilet. Avoid contact with skin.

9. Physical and chemical properties

Appearance

Physical state:	liquid
Form:	liquid
Color:	Milky white
Odor:	Characteristic
Odor threshold:	No data available.
pH:	4.5
Melting point/freezing point:	32 °F
Initial boiling point and boiling range:	212 °F
Flash Point:	Not applicable
Evaporation rate:	No data available.
Flammability (solid, gas):	No data available.
Upper/lower limit on flammability or explosive limits	
Flammability limit - upper (%):	
Flammability limit - lower (%):	
Explosive limit - upper (%):	No data available.
Explosive limit - lower (%):	No data available.
Vapor pressure:	23 kPa
Vapor density:	No data available.
Relative density:	Not determined.
Solubility(ies)	
Solubility in water:	Soluble
Solubility (other):	The product is soluble in water.
Partition coefficient (n-octanol/water):	No data available.
Auto-ignition temperature:	Product is not self-igniting.
Decomposition temperature:	No data available.
Viscosity:	15,000 mm2/s (23 °C)

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10. Stability and reactivity

Reactivity: Product is not reactive under normal conditions and recommended use.

Chemical Stability: No data available.

Possibility of hazardous reactions: None under normal conditions.

Conditions to avoid: Avoid exposure to high temperatures or direct sunlight.

Incompatible Materials: Strong oxidizing agents.

Hazardous Decomposition Products: By heating and fire, harmful vapors/gases may be formed.

11. Toxicological information

General information: May cause allergic skin reaction based on human experience. Irritating.

Information on likely routes of exposure

Ingestion: Ingestion may cause irritation and malaise.

Inhalation: Under normal conditions of intended use, this material is not expected to be an inhalation hazard.

Skin Contact: Prolonged or repeated contact may cause skin sensitization in susceptible individuals. Causes skin irritation.

Eye contact: Irritating to eyes.

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.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral
Product: ATEmix: 12,499.24 mg/kg

Dermal
Product: No data available.

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Inhalation
Product: No data available.

Repeated dose toxicity
Product: No data available.

Skin Corrosion/Irritation
Product: Causes skin irritation.

Serious Eye Damage/Eye Irritation
Product: No data available.

Respiratory or Skin Sensitization
Product: Skin sensitizer

Carcinogenicity
Product: No data available.

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.

In vivo
Product: No data available.

Reproductive toxicity
Product: No data available.

Specific Target Organ Toxicity - Single Exposure
Product: No data available.

Specific Target Organ Toxicity - Repeated Exposure
Product: No data available.

Aspiration Hazard

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Product: No data available.

Other effects: No data available.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish
Product: No data available.

Specified substance(s):
Phenol, 4-chloro-3,5-dimethyl- LC 50 (Oncorhynchus mykiss, 96 h): 0.36 mg/l

LC 50 (Guppy (Poecilia reticulata), 24 h): 1.64 mg/l Mortality

Aquatic Invertebrates
Product: No data available.

Specified substance(s):
Phenol, 4-chloro-3,5-dimethyl- EC 50 (Daphnia magna, 48 h): 7.7 mg/l

Chronic hazards to the aquatic environment:

Fish
Product: No data available.

Aquatic Invertebrates
Product: No data available.

Toxicity to Aquatic Plants
Product: No data available.

Persistence and Degradability

Biodegradation
Product: No data available.

BOD/COD Ratio
Product: No data available.

Bioaccumulative potential

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Bioconcentration Factor (BCF)

Product: No data available.

Partition Coefficient n-octanol / water (log Kow)

Product: Log Kow: No data available.

Mobility in soil: No data available.

Known or predicted distribution to environmental compartments

Phenol, 4-chloro-3,5-dimethyl- No data available.

Other adverse effects: No data available.

13. Disposal considerations

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

Disposal instructions: Must not be disposed of with solid waste. Dispose of material in accordance with federal (40 CFR 261.3), state and local requirements. RCRA Hazardous Waste - D039 (product contains <0.012% Tetrachloroethylene). Discharge, treatment, or disposal may be subject to national, state, or local laws. Since emptied containers retain product residue, follow label warnings even after container is emptied.

Contaminated Packaging: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal. Water, if necessary with cleansing agents.

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.

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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.

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
Hydrochloric acid	5000 lbs.
Sodium hydroxide (Na(OH))	1000 lbs.
2-Propanol	100 lbs.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate (Acute) Health Hazards
Respiratory or Skin Sensitization

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SARA 302 Extremely Hazardous Substance

Chemical Identity	Reportable quantity	Threshold Planning Quantity
Hydrochloric acid	5000 lbs.	500 lbs.

SARA 304 Emergency Release Notification

Chemical Identity	Reportable quantity
Hydrochloric acid	5000 lbs.
Sodium hydroxide (Na(OH))	1000 lbs.
2-Propanol	100 lbs.

SARA 311/312 Hazardous Chemical

Chemical Identity	Threshold Planning Quantity
Hydrochloric acid	500lbs
Phenol, 4-chloro-3,5-dimethyl-	10000 lbs
Sodium hydroxide (Na(OH))	10000 lbs
2-Propanol	10000 lbs
Cellulose	10000 lbs

SARA 313 (TRI Reporting)

None present or none present in regulated quantities.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)

Chemical Identity	Reportable quantity
Hydrochloric acid	Reportable quantity: 5000 lbs.
Sodium hydroxide (Na(OH))	Reportable quantity: 1000 lbs.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):

Chemical Identity	Reportable quantity
Hydrochloric acid	15000 lbs
Hydrochloric acid	5000 lbs

US State Regulations

US. California Proposition 65

No ingredient requiring a warning under CA Prop 65.

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

Chemical Identity
1,2-PROPANEDIOL

US. Massachusetts RTK - Substance List

Chemical Identity
Hydrochloric acid

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US. Pennsylvania RTK - Hazardous Substances

Chemical Identity
1,2-PROPANEDIOL

US. Rhode Island RTK

Chemical Identity
1,2-PROPANEDIOL

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

Issue Date:	10/23/2019
Version #:	3.1
Revision Information:	
Further Information:	No data available.
Disclaimer:	Disclaimer: The information contained herein has been obtained from various sources and is believed to be correct as of the date issued. However, neither BD nor any of its subsidiaries assumes any liabilities whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability for a particular use 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. BD provides SDS in electronic form so the information may be more easily accessed. Due to the possibility of errors during transmission, BD makes no representations as to the completeness or accuracy of the information.