SAFETY DATA SHEETS

This SDS packet was issued with item:

078043107

N/A

PRODUCT NAME: E-Z SCRUB™ Scrub 747/749 4% CHG

Catalog Nos.371073, 377477 and 377479 **Date:** 04/19/10 **Revision #:** 4



PRODUCT AND COMPANY INFORMATION - SECTION 1

Company Identification Name: Becton Dickinson Medical Systems

Address: 9450 South State Street

Sandy, UT 84070

FOR CHEMICAL EMERGENCY, SPILL, LEAK, FIRE, EXPOSURE, OR ACCIDENT:

In the continental U.S., call: 801.565.2300 (24 hour)

For additional information, call: 888.237.2762

(M-F, 8:00 AM-4:30 PM EST)

COMPOSITION INFORMATION – SECTION 2

Product Name: BD E-Z Scrub with Chlorhexidine Gluconate as Surgical Hand Scrub

Chemical Formula: Proprietary Mixture

Chemical NamePercent Wt.CAS NumberRTEC\$ NumberChlorhexidine
Gluconate4.018472-51-0DU1950000

This is a water-based solution of surfactants and Chlorhexidine Gluconate.

	OSHA REGULATORY STATUS
	This material is classified as not hazardous under OSHA regulations.
Х	While this material is not classified as hazardous under OSHA regulations, this MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of the product.
	This material is classified as hazardous under OSHA regulations.

HAZARDS IDENTIFICATION – SECTION 3

EMERGENCY OVERVIEW	-	Presents little or no hazard if spilled. Presents little or no fire hazard. For external use only: keep out of eyes, ears, and mouth.
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Clear, pink/red liquid with perfumed odor.

POTENTIAL HEALTH EFFECTS

Eyes: May cause permanent damage.
Ears: May cause permanent hearing loss.

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PRODUCT NAME: E-Z SCRUB™ Scrub 747/749 4% CHG

Catalog Nos.371073, 377477 and 377479





POTENTIAL HEALTH EFFECTS

Skin: May cause irritation in hypersensitive individuals. Avoid contact with

meninges.

Inhalation: Overexposure may cause headache, fatigue, dizziness, loss of

coordination, and unconsciousness. Vapor has anesthetic properties.

Ingestion: Harmful if swallowed.

FIRST AID MEASURES - SECTION 4

Seek medical attention for all cases of overexposure.

FIRST AID MEASURES

Eyes: Flush thoroughly with water for at least 15 minutes. Seek medical

attention.

Ears: Flush with water, repeating several times. Seek medical attention.

Skin: Flush with water. Seek medical attention.

Ingestion: Wash out mouth with water. Treat with gastric lavage using milk, egg

white, or mild soap. Seek medical attention.

Inhalation: Remove patient from exposure. Keep warm and at rest. Seek medical

attention if ill effects occur.

FIRE FIGHTING MEASURES – SECTION 5

	NFPA Rating	
Health	Fire	Reactivity
1	0	0

Flammability Properties

Flash Point / Method: N/A

Flammability Limits: LEL: N/A UEL: N/A

(in air % by volume)

Autoignition Temperature: U/K

Hazardous Combustion Carbon dioxide, carbon monoxide, hydrogen chloride

Products: gas, nitrogen oxides, ammonia.

Extinguishing Media: Water, foam, dry chemical, carbon dioxide.

Fire Fighting Instructions: As in any fire, wear full protective clothing and NIOSH-

approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other

positive pressure mode.

Unusual Fire and Explosion Hazards:

sual Fire and Emits toxic fumes under fire conditions.

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PRODUCT NAME: E-Z SCRUB™ Scrub 747/749 4% CHG

Catalog Nos.371073, 377477 and 377479 **Date:** 04/19/10 **Revision #:** 4



ACCIDENTAL RELEASE MEASURES - SECTION 6

Absorb spilled material with suitable absorbent. Transfer to container for disposal in accordance with regulatory requirements. Mop area clean.

HANDLING & STORAGE – SECTION 7

Handling: External use only. Avoid contact with eyes, ears, and mouth. **Storage:** Store at room temperature. Protect from light. Avoid excessive

heat (104°F).

EXPOSURE CONTROLS / PERSONAL PROTECTION – SECTION 8

Engineering Controls: General ventilation for conditions of prescribed use.

Personal Protective Equipment

Eye/Face Protection: Not required for normal use. Wear safety goggles or a

full face shield for spill cleanup or if splashing is

possible.

Skin Protection: Not required for normal use. Wear impervious gloves

and apron for spill cleanup.

Respiratory Protection: Not required for normal use. Use NIOSH approved

respirator for organic vapors, if necessary.

Exposure Guidelines

OSHA PEL: N/A ACGIH TLV: N/A

PHYSICAL & CHEMICAL PROPERTIES - SECTION 9

Appearance, Physical State: Clear, pink / red liquid

Odor: Perfumed

Molecular Weight: N/A

pH: 6-7.5

Boiling Point: Similar to water **Melting Point:** Similar to water

Melting Point: Similar to water **Vapor Pressure (mm Hg):** Similar to water

Vapor Density (Air=1): Similar to water

Solubility in Water: Soluble Specific Gravity: 1.06

Viscosity @ 25°C: 50-500 CPS

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PRODUCT NAME: E-Z SCRUB™ Scrub 747/749 4% CHG

Catalog Nos.371073, 377477 and 377479 **Date:** 04/19/10 **Revision #:** 4



STABILITY & REACTIVITY – SECTION 10

Stability: Stable under normal conditions

Conditions to Avoid: High heat

Materials to Avoid:Strong oxidizing agents, anionic compoundsHazardous DecompositionCarbon monoxide, carbon dioxide, nitrogen oxides, ammonia, hydrogen chloride gas

Hazardous Polymerization: Will not occur

TOXICOLOGICAL INFORMATION – SECTION 11

Chlorhexidine gluconate: oral LD50 = 1260 mg/kg (mouse) - 2 g/kg (rat)

No significant human data is available for this material.

ECOLOGICAL INFORMATION – SECTION 12

Harmful to aquatic organisms; may cause long-term adverse effects in the aquatic environment. Low toxicity to sewage microorganisms.

DISPOSAL CONSIDERATION – SECTION 13

Dispose of in accordance with Federal, state and local regulations. Discarded product is not a hazardous waste under RCRA, 40 CFR 261. Empty container retains product residue. Observe all hazard precautions.

TRANSPORT INFORMATION - SECTION 14

DOT CLASSIFICATION: Not regulated in non-bulk packaging

IATA CLASSIFICATION: Not Regulated **IMDG CLASSIFICATION:** Not Regulated

REGULATORY INFORMATION – SECTION 15

US REGULATIONS

OSHA Not Regulated

TSCA All ingredients are on the TSCA Chemical Substances

Inventory (8(b)).

CERCLA Not Regulated SARA Title III Not Regulated

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PRODUCT NAME: E-Z SCRUB™ Scrub 747/749 4% CHG

Catalog Nos.371073, 377477 and 377479 **Date:** 04/19/10 **Revision #:** 4



STATE REGULATIONS

MA Substance List

NJ Right-to-Know Hazardous

Not Regulated

Not Regulated

Substance List

PA Hazardous Substance List Not Regulated Canadian WHMIS Not Regulated

OTHER INFORMATION - SECTION 16

Definitions:

UIK = Unknown **NIA** = Not Applicable

To the best of our knowledge, the information contained herein is accurate. However, neither Becton Dickinson nor any of its subsidiaries assumes any liability 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. The possibility exists that the EU will not recognize this MSDS due to the fact that several components of the MSDS are reflective of ANSI Z-400.1-1998. Although ILO (International Labor Organization) has adopted ANSI Z-400.1-1998, ultimate disposition lies with the competent authority.

 PRODUCT NAME:
 E-Z SCRUB™ Scrub 747/749 4% CHG

 Catalog Nos.371073, 377477 and 377479

Date: 04/19/10 Revision #: 4



VERSION HISTORY

Version	Description	ECO Number	Version Prepared By
4	Review and Update: From the Header: Remove Obsolete Catalog Number 377496 add Catalog Number 371073. Update the Date to 4/19/10 and the Revision to 4. Also, corrected QDMS Attributes from WWB104 to WWB108.	ECO123316	Rachel LeBlanc Janet Boggess
3	Review and update document. Show review date in header (10/29/08) and footer (10-08). After review, update section 14 to remove "Combustible liquid" So this section becomes: "Not regulated in non-bulk packaging". CCB# 1599 (10/30/2008).	ECO92782	Janet Boggess Rachel LeBlanc
2	Date of MSDS 14536 and D14554 updated to current date 9/13/05 to comply with regulation in Canada. And change Version number.	ECO35390	George Nolan



Date Prepared: 03/22/2017 Reviewed On: 03/22/2017

1 Identification

· Product Identifier:

· Product Name: E-Z Scrub 4% CHG

· Catalog Number: 371073

· Application of the substance / the mixture Skin Antiseptic.

· Details of the supplier of the safety data sheet

· Manufacturer/Supplier:

Becton Dickinson (BD)

9450 South State Street

Sandy, UT 84070

BD Diagnostic Systems

7 Loveton Circle

Sparks, MD 21152

Telephone: (410) 771 - 0100 or (800) 638 - 8663

Email Address: Technical_Services@bd.com
• Information Department: Technical Service

· Emergency telephone number:

1-801-565-2300 (US 24 hour) +001 801-565-2300 (International 24 hour)

In case of a chemical emergency, spill, fire, exposure, or accident contact Chemtrec: 800-

424-9300 or +001 703-527-3887 (International).

In case of a chemical emergency, spill, fire, exposure, or accident, contact BD Diagnostic Systems (410) 771-0100 or (800)-638-8663, or ChemTrec at (800) 424-9300.

2 Hazard(s) identification

· Classification of the substance or mixture



Skull and crossbones

Acute Tox. 3 H301 Toxic if swallowed.

Acute Tox. 3 H311 Toxic in contact with skin.



Health hazard

Carc. 2 H351 Suspected of causing cancer.



Environment

Aquatic Acute 1 H400 Very toxic to aquatic life.

- · Label elements
- · GHS label elements

The product is classified and labeled according to the Globally Harmonized System (GHS).

(Contd. on page 2)

US



Date Prepared: 03/22/2017 Reviewed On: 03/22/2017

Product Name: E-Z Scrub 4% CHG

(Contd. of page 1)

· Hazard pictograms







GHS06 GHS08 GHS09

· Signal word Danger

· Hazard-determining components of labeling:

chlorhexidine gluconate

2,2'-iminodiethanol

· Hazard statements

H301+H311 Toxic if swallowed or in contact with skin.

H351 Suspected of causing cancer. H400 Very toxic to aquatic life.

· Precautionary statements

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P273 Avoid release to the environment. P264 Wash thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

P321 Specific treatment (see on this label).

P312 Call a POISON CENTER/doctor if you feel unwell. P308+P313 IF exposed or concerned: Get medical advice/attention.

P330 Rinse mouth.

P302+P352 IF ON SKIN: Wash with plenty of water.

P391 Collect spillage.

P361+P364 Take off immediately all contaminated clothing and wash it before reuse.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/

international regulations.

· Information pertaining to particular dangers for man and environment

CHG may cause permanent damage / deafness when instilled in the middle ear May cause permanent damage if permitted to enter and remain in the ears or eyes for a long period of time

· NFPA ratings (scale 0-4)



Health = 1 Flammability = 0 Reactivity = 0

(Contd. on page 3)



Reviewed On: 03/22/2017 Date Prepared: 03/22/2017

Product Name: E-Z Scrub 4% CHG

(Contd. of page 2)

· HMIS ratings (scale 0-4)



○ Flammability = 0

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

3 Composition/information on ingredients

- · Chemical characterization: Mixture
- · **Description**: Mixture consisting of the following components.

ſ	· Dangerous Components:			
Ī		chlorhexidine gluconate	4.34%	
	EINECS: 242-354-0	Acute Tox. 2, H300; Acute Tox. 1, H310; Aquatic Acute 1, H400; Aquatic Chronic 1, H410		
Ī		2,2'-iminodiethanol	3.28%	
	EINECS: 203-868-0	Carc. 2, H351; STOT RE 2, H373; Eye Dam. 1, H318; Acute Tox. 4, H302; Skin Irrit. 2, H315		

· Additional information Risk phrases refer to section 15.

4 First-aid measures

- · Description of first aid measures
- · General information No special measures required.
- · After inhalation

Seek medical treatment in case of complaints.

Overexposure may cause headache, fatigue, dizziness, loss of coordination, and unconsciousness. Vapor has anesthetic properties.

· After skin contact

Immediately rinse with water.

Seek medical treatment.

· After eye contact

Rinse opened eye for 15 minutes under running water. Then consult a doctor.

· After swallowing

Harmful if swallowed

Wash out mouth with water. Treat with gastric lavage using milk, egg white, or mild soap. Seek medical attention.

- · Information for doctor
- · Most important symptoms and effects, both acute and delayed No further relevant information available.

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Date Prepared: 03/22/2017 Reviewed On: 03/22/2017

Product Name: E-Z Scrub 4% CHG

(Contd. of page 3)

· Indication of any immediate medical attention and special treatment needed No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- · Suitable extinguishing agents

Water

Foam

Fire-extinguishing powder

Carbon dioxide

· Special hazards arising from the substance or mixture

Carbon dioxide, carbon monoxide, hydrogen chloride gas, nitrogen oxides, ammonia.

- · Advice for firefighters
- · Protective equipment:

Wear self-contained respiratory protective device.

Wear fully protective suit.

6 Accidental release measures

- · Personal precautions, protective equipment and emergency procedures Not required.
- · Environmental precautions: Wipe up with damp sponge or mop.
- · Methods and material for containment and cleaning up: No special measures required.
- · 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

- · Handling
- · Precautions for safe handling No special measures required.
- 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:

Store at room temperature (20 - 25 $^{\circ}$ C) or (68 - 77 $^{\circ}$ F)

Avoid excessive heat (above $40^{\circ}C$ or $104^{\circ}F$)

Information about storage in one common storage facility: Store away from oxidizing agents.

(Contd. on page 5)



Date Prepared: 03/22/2017 Reviewed On: 03/22/2017

Product Name: E-Z Scrub 4% CHG

(Contd. of page 4)

· 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 Section 7.

- · Control parameters
- · Components with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

- · Additional information: The lists that were valid during the creation were used as basis.
- · Exposure controls
- · Personal Protective Equipment
- · General protective and hygienic measures

The usual precautionary measures for handling chemicals should be followed.

- · Breathing equipment: Not required.
- · Protection of hands:

Gloves are not required for normal conditions of use,

Use gloves for spill cleanup.

- · 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
Pink
Red

Odor: CharacteristicOdor threshold: Not determined.

• **pH-value:** 6.0 - 7.5

Change in condition
 Melting point/Melting range:
 Boiling point/Boiling range:
 Undetermined
 Similiar to water.

· Flash point: Not applicable

(Contd. on page 6)



Date Prepared: 03/22/2017 Reviewed On: 03/22/2017

Product Name: E-Z Scrub 4% CHG

	(Contd. of page
· 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 determined.
· Density:	
Relative density	1.06 g/cm³ (8.846 lbs/gal)
Vapor density	Not determined.
Evaporation rate	Not determined.
· Solubility in / Miscibility with	
Water:	Soluble
· Partition coefficient (n-octanol/wat	ter): Not determined.
· Viscosity:	
dynamic:	50-500 CPS
kinematic:	Not determined.
· Other information	No further relevant information available.

10 Stability and reactivity

- · Reactivity No further relevant information available.
- · 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.

Anionic Compounds.

· Hazardous decomposition products:

Carbon monoxide (CO) and carbon dioxide (CO2)

Nitrogen oxides (NOx)

Ammonia (NH4)

(Contd. on page 7)

US



Date Prepared: 03/22/2017 Reviewed On: 03/22/2017

Product Name: E-Z Scrub 4% CHG

(Contd. of page 6)

Hydrogen chloride (HCI) gas

11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity:
- · Primary irritant effect:
- · on the skin: May cause irritation to skin and mucous membranes.
- on the eye: Strong irritant with the danger of severe eye injury.
- · Sensitization: No sensitizing effects known.
- · Additional toxicological information:

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

The product is not subject to OSHA classification according to internally approved calculation methods for preparations.

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

· Carcinogenic categories

· IARC (International Agency for Research on Cancer)			
	2,2'-iminodiethanol	2B	
7647-01-0	hydrochloric acid	3	
	1,4-dioxane	2B	
75-21-8	ethylene oxide	1	
NTD (National Taxicalogy Program)			

· NTP (National Toxicology Program)

None of the ingredients is listed.

· OSHA-Ca (Occupational Safety & Health Administration)

75-21-8 ethylene oxide

12 Ecological information

- Toxicity
- · Aquatic toxicity:

Harmful to aquatic organisms; may cause long-term adverse effects in the aquatic environment. Low toxicity to sewage microorganisms.

LC-50: Zebra danio (Danio rerio) 2.08 mg/L (96 hour)

- · Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- · Mobility in soil No further relevant information available.

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Product Name: E-Z Scrub 4% CHG

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- · Ecotoxical effects:
- · Other information:

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

- · 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

Smaller quantities can be disposed of with solid waste.

This product is not considered a RCRA hazardous waste.

Dispose of material in accordance with federal (40 CFR 261.3), state and local requirements.

- · Uncleaned packagings:
- · Recommendation: Disposal must be made according to state and federal regulations.
- · Recommended cleansing agent: Water, if necessary with cleansing agents.

· UN-Number	
· DOT, ADN, IMDG, IATA	Void
· UN proper shipping name	
· DOT, ADN, IMDG, IATA	Void
· Transport hazard class(es)	
· DOT, ADN, IMDG, IATA	
· Class	Void
· Packing group	
· DOT, IMDG, IATA	Void
Environmental hazards:	Product contains environmentally hazardous substances: chlorhexidine gluconate
· Marine pollutant:	Yes
Special precautions for user	Not applicable.

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Product Name: E-Z Scrub 4% CHG

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· Transport in bulk according to Annex MARPOL73/78 and the IBC Code	II of Not applicable.
· Transport/Additional information:	Not dangerous according to the above specifications.
· UN "Model Regulation":	Void

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)

111-42-2 2,2'-iminodiethanol

· TSCA (Toxic Substances Control Act)

All ingredients are listed.

· California Proposition 65 - Chemicals known to cause cancer

111-42-2 2,2'-iminodiethanol

123-91-1 1,4-dioxane

75-21-8 ethylene oxide

 California Proposition 65 - Chemicals known to cause reproductive toxicity for females:

75-21-8 ethylene oxide

- · California Proposition 65 Chemicals known to cause reproductive toxicity for males: 75-21-8 ethylene oxide
- · California Proposition 65 Chemicals known to cause developmental toxicity: 75-21-8 ethylene oxide

· Carcinogenic categories

· TLV (Threshold Limit Value established by ACGIH)			
111-42-2	2,2'-iminodiethanol	A3	
7647-01-0	hydrochloric acid	A4	
123-91-1	1,4-dioxane	A3	
75-21-8	ethylene oxide	A2	

· GHS label elements

The product is classified and labeled according to the Globally Harmonized System (GHS).

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- US



Date Prepared: 03/22/2017 Reviewed On: 03/22/2017

Product Name: E-Z Scrub 4% CHG

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· Hazard pictograms







GHS06 GHS08 GHS09

· Signal word Danger

· Hazard-determining components of labeling:

chlorhexidine gluconate

2.2'-iminodiethanol

· Hazard statements

H301+H311 Toxic if swallowed or in contact with skin.

H351 Suspected of causing cancer. H400 Very toxic to aquatic life.

· Precautionary statements

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P273 Avoid release to the environment. P264 Wash thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

P321 Specific treatment (see on this label).

P312 Call a POISON CENTER/doctor if you feel unwell. P308+P313 IF exposed or concerned: Get medical advice/attention.

P330 Rinse mouth.

P302+P352 IF ON SKIN: Wash with plenty of water.

P391 Collect spillage.

P361+P364 Take off immediately all contaminated clothing and wash it before reuse.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/

international regulations.

· 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 can not quarantee that these are the only hazards that exist.

(Contd. on page 11)





Reviewed On: 03/22/2017 Date Prepared: 03/22/2017

Product Name: E-Z Scrub 4% CHG

(Contd. of page 10)

Department issuing SDS:

Environmental, Health & Safety Created by Michael J. Spinazzola

· Contact: Technical Service Representative

· Abbreviations and acronyms:

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

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

NFPA: National Fire Protection Association (USA) HMIS: Hazardous Materials Identification System (USA)

PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit Acute Tox. 2: Acute toxicity - Category 2

Acute Tox. 3: Acute toxicity - Category 3

Acute Tox. 4: Acute toxicity - Category 4

Acute Tox. 1: Acute toxicity - Category 1 Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Dam. 1: Serious eye damage/eye irritation - Category 1

Carc. 2: Carcinogenicity – Category 2 Carc. 2: Carcinogenicity – Category 2

STOT RE 2: Specific target organ toxicity (repeated exposure) - Category 2

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard - Category 1 Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard - Category 1

US