

# MATERIAL SAFETY DATA SHEET

**PRODUCT NAME:** Persist Plus/ PERSIST CHG Protective Barrier  
Finished Product  
**Date:** 2/08/05



## 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

**Chemical Name:** 1,1'-hexamethylenebis[5-(4-chlorophenyl)biguanide] digluconate in Ethanol.

**Synonym:** Chlorhexidine Gluconate with Ethyl Alcohol

<u>Chemical Name</u>	<u>Percent</u>	<u>CAS Number</u>	<u>RTECS Number</u>
Chlorhexidine Gluconate, 20%	1.0	18472-51-0	DU1950000
Ethanol	> 70.0	64-17-5	KQ6300000

## OSHA REGULATORY STATUS

	This material is classified as not hazardous under OSHA regulations.
	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.
X	This material is classified as hazardous under OSHA regulations.

## HAZARDS IDENTIFICATION – SECTION 3

<b>EMERGENCY OVERVIEW</b>	<ul style="list-style-type: none"><li>▪ Keep out of reach of children.</li><li>▪ For external use only.</li><li>▪ May cause permanent damage if permitted to enter and remain in the ears or eyes for a long period of time.</li></ul>
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## HAZARDS IDENTIFICATION – SECTION 3 (Continued)

### POTENTIAL HEALTH EFFECTS

- Eyes:** May cause irritation and/or permanent damage.
- Ears:** CHG may cause permanent damage / deafness when instilled in the middle ear.
- Skin:** May cause severe irritation / defatting / dermatitis / allergic reactions in sensitive individuals.
- Inhalation:** Not expected to present a significant inhalation hazard under normal conditions of use. Ethanol may cause headache, drowsiness, fatigue, narcosis, loss of appetite, inability to concentrate, and irritation of the respiratory tract.
- Ingestion:** May cause stomach pains, vomiting, and diarrhea, as well as depression of the central nervous system.
- Chronic Effects:** Liver damage, anemia, and reproductive and teratogenic problems.

## FIRST AID MEASURES – SECTION 4

**SEEK IMMEDIATE MEDICAL ATTENTION  
FOR ALL CASES OF OVEREXPOSURE.**

### FIRST AID MEASURES

- Eyes:** Flush eyes with copious amounts of running water for at least 15 minutes.
- Ears:** Flush ears with copious amounts of running water for at least 15 minutes.
- Skin:** Remove any contaminated clothing. Flush affected area for at least 15 minutes with copious amounts of running water.
- Inhalation:** Immediately remove victim to fresh air. Support breathing as needed.
- Ingestion:** Dilute with milk or water. Never give anything by mouth if the victim is unconscious or having convulsions. Induce vomiting only as directed by physician or Poison Control Center.

## FIRE FIGHTING MEASURES – SECTION 5

<b><u>NFPA Rating</u></b>		
Health	Fire	Reactivity
3	3	1

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## FIRE FIGHTING MEASURES – SECTION 5 (Continued)

### Flammability Properties

**Flash Point / Method:** 55° F (ASTM D-56) (Ethanol)  
**Flammability Limits:** **LEL:** 3.3% (Ethanol) **UEL:** 19% (Ethanol)  
(in air % by volume)  
**Autoignition Temperature:** U/K  
**Hazardous Combustion Products:** U/K  
**Extinguishing Media:** Dry chemical, foam, or carbon dioxide. Water may be ineffective, but water spray should be used to cool fire exposed containers and disperse vapors that have not yet ignited.  
**Firefighting 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:** Burning packaging materials may cause dense smoke and fumes.

## ACCIDENTAL RELEASE MEASURES - SECTION 6

**Large Spill:** Absorb the spill with suitable material and transfer to container for disposal as hazardous waste.  
**Small Spill:** Flush small amounts to sanitary sewer if local and state regulations permit.

## HANDLING & STORAGE – SECTION 7

**Handling:** Avoid contact with eyes, ears, or mouth.  
**Storage:** Store at room temperature (68° F to 77° F). Avoid excessive heat (104° F). Store isolated from oxidizers, ignition sources, and explosives. Consult local fire codes for additional storage information.

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## EXPOSURE CONTROLS / PERSONAL PROTECTION – SECTION 8

**Engineering Controls:** General and / or local exhaust to maintain exposure below the TLV.

### Personal Protective Equipment

**Eye/Face Protection:** Safety glasses recommended.  
**Skin Protection:** Latex gloves recommended for normal use.  
Nitrile gloves recommended for spill cleanup.  
**Respiratory Protection:** Not required for normal use.  
**General Hygiene Considerations:** Not required under normal product usage.

### Exposure Guidelines

<b>OSHA PEL:</b> 1000 ppm (Ethanol)	<b>ACGIH TLV:</b> 1000 ppm (Ethanol)
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## PHYSICAL & CHEMICAL PROPERTIES – SECTION 9

CONSTITUENT:	Chlorhexidine Gluconate 20%	Ethanol	Product
<b>Appearance,</b>	N/A	N/A	Bright green
<b>Physical State:</b>			liquid
<b>Odor:</b>	N/A	N/A	Pleasant, mild
			odor
<b>Molecular</b>	U/K	U/K	U/K
<b>Weight:</b>			
<b>pH:</b>	U/K	U/K	U/K
<b>Boiling Point:</b>	Approx. 97° F	173° F	U/K
<b>Melting Point:</b>	N/A	N/A	N/A
<b>Vapor Pressure</b>	U/K	44 mm @ 68° F	U/K
<b>(mm Hg):</b>			
<b>Vapor Density</b>	U/K	1.59	U/K
<b>(Air=1):</b>			
<b>Solubility in</b>	Miscible	Miscible	Precipitation
<b>Water:</b>			
<b>% Volatile By</b>	U/K	100%	U/K
<b>Volume:</b>			

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## STABILITY & REACTIVITY – SECTION 10

**Stability:** Stable under normal temperatures and pressures.

**Conditions to Avoid:** Excessive heat.

**Materials to Avoid:** Strong oxidizers, potassium dioxide, bromine pentafluoride, acetyl bromide, acetyl chloride, platinum, sodium.

**Hazardous Decomposition Products:** Decomposition yields carbon dioxide, carbon monoxide, hydrogen chloride gas, and p-chloroaniline.

**Hazardous Polymerization:** Not likely

## TOXICOLOGICAL INFORMATION – SECTION 11

**Chlorhexidine Gluconate** Rat (Oral) LD50: 2 Gm/Kg  
**Ethanol** Rat (Oral) LD50: 13.7 Gm/Kg

## ECOLOGICAL INFORMATION – SECTION 12

No significant data is available for this material.

## DISPOSAL CONSIDERATION – SECTION 13

This product contains listed hazardous waste and should be disposed of by a permitted hazardous waste disposal company. Follow all current Federal, state, and local regulations and guidelines.

## TRANSPORT INFORMATION - SECTION 14

### **DOT CLASSIFICATION:**

Small Quantity, Class 3  
Refer to 49 CFR 173.4 for additional information.

### **IATA CLASSIFICATION:**

Dangerous Goods in Excepted Quantities, Class 3  
Refer to IATA Section 2.7 for additional information.

### **IMDG CLASSIFICATION:**

Dangerous Goods in Limited Quantities of Class 3  
Refer to IMDG Code Volume 2, pages 47 and 192 for additional information.

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## REGULATORY INFORMATION – SECTION 15

### US REGULATIONS

<b>OSHA</b>	Ethanol: Listed on Table Z-1 (Limits for Air Contaminants)
<b>TSCA</b>	Not Listed
<b>CERCLA</b>	Not Listed
<b>SARA Title III</b>	Not Listed

### STATE REGULATIONS

<b>MA Substance List</b>	Ethanol: Listed
<b>NJ Right-to-Know Hazardous Substance List</b>	Ethanol: Listed
<b>PA Hazardous Substance List</b>	Ethanol: Listed

## OTHER INFORMATION - SECTION 16

### Definitions:

**U/K** = Unknown

**N/A** = 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.

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## VERSION HISTORY

Version	Description	ECO Number	Version Prepared By
5	Remove the words "special" and "denatured " through out the document and leave just "ethanol". Correct the % ethanol in section 2 to >70% based on the product specification range listed in PPS-087. Change the column header from Percent Wt to just Percent. These changes are being made under PDN 04-0212-081 to change Persist Plus from SDA 40-2 ethanol to USP ethanol and reviewers comments from QA and RA. CC # 1147.	ECO24722	Don Hunt / Minh Hoang