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SAFETY DATA SHEET

1. Identification

Product identifier

Product No.:	Product name:	Common name(s), synonym(s)
930415NSB	BD™ ChloraPrep™ Sterile Solution Applicator with Hi-Lite Orange™ Tint, 3 mL, NSB	

Other means of identification

SDS number: 088100322258

Recommended use and restriction on use

Recommended use: Skin Antiseptic
Restrictions on use: For External Use Only

Manufacturer/Importer/Supplier/Distributor Information

Manufacturer

Company Name:	Becton Dickinson
Address:	1550 Northwestern Dr El Paso, TX 79912 USA
Telephone:	800-523-0502 (Monday to Friday 8 a.m. to 5 p.m. CT)
Fax:	
Contact Person:	Customer Service

Emergency telephone number: ChemTrec 1 800 424 9300

2. Hazard(s) identification

Hazard Classification

Physical Hazards

Flammable liquids	Category 2

Health Hazards

Serious Eye Damage/Eye Irritation	Category 2
Specific Target Organ Toxicity - Single Exposure	Category 3

Environmental Hazards

Acute hazards to the aquatic environment	Category 2
Chronic hazards to the aquatic environment	Category 3

Label Elements

Hazard Symbol:

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Signal Word:	Danger
Hazard Statement:	H225: Highly flammable liquid and vapor. H319: Causes serious eye irritation. H336: May cause drowsiness or dizziness. H401: Toxic to aquatic life. H412: Harmful to aquatic life with long lasting effects.
Precautionary Statements	
Prevention:	P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P233: Keep container tightly closed. P242: Use non-sparking tools. P273: Avoid release to the environment.
Response:	P370+P378: In case of fire: Use water for extinction. P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313: If eye irritation persists: Get medical advice/attention.
Storage:	P403+P233: Store in a well-ventilated place. Keep container tightly closed.
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:	-: May cause permanent damage if permitted to enter and remain in the ears or eyes for a long period of time :

3. Composition/information on ingredients

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Mixtures

Chemical Identity	Common name and synonyms	CAS number	Content in percent (%)*
2-Propanol		67-63-0	62.3%
D-Gluconic acid, compd. with N1,N14-bis(4-chlorophenyl)-3,12-diimino-2,4,11,13-tetraazatetradecanediimidamide (2:1)		18472-51-0	2.3%

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

4. First-aid measures

General information: Get medical attention if symptoms occur.

Ingestion: Drink plenty of water. Get medical attention immediately.

Inhalation: Move to fresh air. Get medical attention if any discomfort continues.

Skin Contact: Wash skin thoroughly with soap and water.

Eye contact: Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention if symptoms persist.

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: No unusual fire or explosion hazards noted.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Use: Water. Water fog. Dry chemical. Alcohol foam.

Unsuitable extinguishing media: Not applicable

Specific hazards arising from the chemical: No data available.

Special protective equipment and precautions for firefighters

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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:	See Section 8 of the SDS for Personal Protective Equipment.
Methods and material for containment and cleaning up:	Small quantities may be flushed to drains with plenty of water. Large Spillages: Absorb spillage with non-combustible, absorbent material. Collect spillage in containers, seal securely and deliver for disposal according to local regulations.
Notification Procedures:	Considering the size of the packaging, the risk is regarded as minimal.
Environmental Precautions:	Avoid release to the environment.

7. Handling and storage

Precautions for safe handling:	Do not eat, drink or smoke when using the product. Avoid ingestion. Avoid contact with eyes, ears, mouth For External Use Only
Conditions for safe storage, including any incompatibilities:	Avoid contact with oxidizing agents. Store in a cool, dry place. Comply with all national, state, and local codes pertaining to the storage, handling, dispensing, and disposal of flammable liquids. 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. Keep out of reach of children.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

Chemical Identity	Type	Exposure Limit Values	Source
2-Propanol	TWA	400 ppm 980 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	STEL	500 ppm 1,225 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (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) (12 2010)

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	ST ESL	2,000 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (12 2010)
	AN ESL	492 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (12 2010)
	ST ESL	4,920 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (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 (12 2010)
	STEL	400 ppm	US. ACGIH Threshold Limit Values (12 2010)
	STEL	500 ppm 1,225 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	REL	400 ppm 980 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	PEL	400 ppm 980 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	LEL	2.0 %	US. NIOSH. Immediately Dangerous to Life or Health (IDLH) Values (10 2017)
	IDLH	2,000 ppm	US. NIOSH. Immediately Dangerous to Life or Health (IDLH) Values (10 2017)

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 so that exposure limits are not exceeded.

Individual protection measures, such as personal protective equipment

General information: Eye bath.

Eye/face protection: Wear safety glasses with side shields (or goggles).

Skin Protection

Hand Protection: Latex gloves for normal use, Nitrile gloves recommended for spill cleanup

Other: No special precautions.

Respiratory Protection: None should be needed.

Hygiene measures: Avoid contact with eyes.

9. Physical and chemical properties

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Appearance

Physical state:	liquid
Form:	liquid
Color:	According to product specification.
Odor:	Alcohol
Odor threshold:	No data available.
pH:	estimated 7.0
Melting point/freezing point:	No data available.
Initial boiling point and boiling range:	87.0 °C
Flash Point:	19.4 °C
Evaporation rate:	No data available.
Flammability (solid, gas):	Flammable liquid
Upper/lower limit on flammability or explosive limits	
Flammability limit - upper (%):	12.7 %(V)
Flammability limit - lower (%):	2.2 %(V)
Explosive limit - upper (%):	No data available.
Explosive limit - lower (%):	No data available.
Vapor pressure:	43 hPa
Vapor density:	No data available.
Relative density:	0.880
Solubility(ies)	
Solubility in water:	Soluble
Solubility (other):	Soluble
Partition coefficient (n-octanol/water):	No data available.
Auto-ignition temperature:	Product is not self-igniting.
Decomposition temperature:	No data available.
Viscosity:	No data available.

Other information

Minimum ignition temperature:	425 °C

10. Stability and reactivity

Reactivity:	No data available.
Chemical Stability:	Material is stable under normal conditions.
Possibility of hazardous reactions:	Not determined.
Conditions to avoid:	Excessive heat.
Incompatible Materials:	Strong oxidizers, potassium dioxide, bromine pentafluoride, acetyl bromide, acetyl chloride, platinum, sodium

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Hazardous Decomposition Products:	Carbon Dioxide. Carbon Monoxide. Chlorinated compounds.

11. Toxicological information

Information on likely routes of exposure

Ingestion:	Due to the small packaging the risk of ingestion is minimal.
Inhalation:	None under normal conditions.
Skin Contact:	Prolonged or repeated skin contact may cause drying, cracking, or irritation.
Eye contact:	Do not get in eyes.

Symptoms related to the physical, chemical and toxicological characteristics

Ingestion:	No data available.
Inhalation:	No specific symptoms noted.
Skin Contact:	Repeated exposure may cause skin dryness or cracking.
Eye contact:	Causes serious eye irritation. May cause permanent damage if eye is not immediately irrigated.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral
Product: ATEmix: 73,913.04 mg/kg

Dermal
Product: No data available.

Inhalation
Product: No data available.

Repeated dose toxicity
Product: No data available.

Specified substance(s):
2-Propanol — NOAEL (Rat, Inhalation, >= 104 Weeks): 5,000 ppm(m) Inhalation Experimental result, Key study

Skin Corrosion/Irritation
Product: No data available.

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Specified substance(s):

2-Propanol	in vivo (Rabbit): Not Classified Experimental result, Key study
D-Gluconic acid, compd. with N1,N14-bis(4-chlorophenyl)-3,12-diimino-2,4,11,13-tetraazatetradecanediimidamide (2:1)	in vivo (Rabbit): Not irritant Experimental result, Key study

Serious Eye Damage/Eye Irritation

Product: No data available.

Specified substance(s):

2-Propanol	in vivo (Rabbit, 1 d): Category 2: Causes serious eye irritation CLP (1272/2008)

Respiratory or Skin Sensitization

Product: No data available.

Specified substance(s):

2-Propanol	Skin sensitization:, in vivo (Guinea pig): Non sensitising

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

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Product: No data available.

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

Aspiration Hazard
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):

2-Propanol	LC 50 (Pimephales promelas, 96 h): 8,680 mg/l LC 50 (Western mosquitofish (Gambusia affinis), 24 h): > 1,400 mg/l Mortality LC 50 (Bluegill (Lepomis macrochirus), 96 h): > 1,400 mg/l Mortality LC 50 (Fathead minnow (Pimephales promelas), 48 h): 10,400 mg/l Mortality LC 50 (Harlequinfish, red rasbora (Rasbora heteromorpha), 96 h): 4,200 mg/l Mortality
D-Gluconic acid, compd. with N1,N14-bis(4-chlorophenyl)-3,12-diimino-2,4,11,13-tetraazatetradecanediimidamide (2:1)	LC 50 (Danio rerio, 96 h): 2.08 mg/l Experimental result, Key study LC 10 (Poecilia reticulata, 5 d): 22 mg/l Experimental result, Supporting study LC 0 (Danio rerio, 96 h): 2 mg/l Experimental result, Key study LC 100 (Danio rerio, 96 h): 3.6 mg/l Experimental result, Key study

Aquatic Invertebrates
Product: No data available.

Specified substance(s):

2-Propanol	EC 100 (Daphnia magna, 24 h): > 10,000 mg/l Experimental result, Supporting study EC 50 (Daphnia magna, 24 h): 9,714 mg/l Experimental result, Supporting study LC 50 (Daphnia magna, 24 h): > 10,000 mg/l Experimental result, Key study LC 50 (Common shrimp, sand shrimp (Crangon crangon), 48 h): 900 - 1,950 mg/l Mortality LC 50 (Common shrimp, sand shrimp (Crangon crangon), 96 h): 750 - 1,650 mg/l Mortality
D-Gluconic acid, compd.	EC 100 (Daphnia magna, 48 h): 0.12 mg/l Experimental result, Key study

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with N1,N14-bis(4-chlorophenyl)-3,12-diimino-2,4,11,13-tetraazatetradecanediimidamide (2:1)	EC 50 (Daphnia magna, 48 h): 0.087 mg/l Experimental result, Key study ED 0 (Daphnia magna, 48 h): 0.04 mg/l Experimental result, Key study EC 50 (Daphnia magna, 48 h): 0.05 - 0.1 mg/l Experimental result, Not specified

Chronic hazards to the aquatic environment:

Fish

Product: No data available.

Aquatic Invertebrates

Product: No data available.

Specified substance(s):

D-Gluconic acid, compd. with N1,N14-bis(4-chlorophenyl)-3,12-diimino-2,4,11,13-tetraazatetradecanediimidamide (2:1)	NOAEL (Daphnia magna, 21 d): 20.6 µg/l Experimental result, Key study EC 50 (Daphnia magna, 21 d): 35.8 µg/l Experimental result, Key study LOAEL (Daphnia magna, 21 d): 61.8 µg/l Experimental result, Key study EC 100 (Daphnia magna, 21 d): 61.8 µg/l Experimental result, Key study

Toxicity to Aquatic Plants

Product: No data available.

Persistence and Degradability

Biodegradation

Product: No data available.

Specified substance(s):

2-Propanol	53 % (5 d) Detected in water. Experimental result, Key study
D-Gluconic acid, compd. with N1,N14-bis(4-chlorophenyl)-3,12-diimino-2,4,11,13-tetraazatetradecanediimidamide (2:1)	52 % Detected in water. Experimental result, Key study 100 % Detected in water. Experimental result, Not specified 79 % Detected in water. Experimental result, Key study 71 % Detected in water. Experimental result, Key study 90 % (28 d) Detected in water. Experimental result, Not specified

BOD/COD Ratio

Product: No data available.

Bioaccumulative potential

Bioconcentration Factor (BCF)

Product: No data available.

Specified substance(s):

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D-Gluconic acid, compd. with N1,N14-bis(4-chlorophenyl)-3,12-diimino-2,4,11,13-tetraazatetradecanediimidamide (2:1)	Leuciscus idus, Bioconcentration Factor (BCF): 42 Aquatic sediment Experimental result, Key study Leuciscus idus, Bioconcentration Factor (BCF): 40 Aquatic sediment Experimental result, Key study Green algae (Chlorella fusca vacuolata), Bioconcentration Factor (BCF): 2,560 (Static) Carp (Leuciscus idus melanotus), Bioconcentration Factor (BCF): 42 (Renewal)

Partition Coefficient n-octanol / water (log Kow)

Product:	No data available.

Specified substance(s):

2-Propanol	Log Kow: 0.05

Mobility in soil: No data available.

Known or predicted distribution to environmental compartments

2-Propanol	No data available.
D-Gluconic acid, compd. with N1,N14-bis(4-chlorophenyl)-3,12-diimino-2,4,11,13-tetraazatetradecanediimidamide (2:1)	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: 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.

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14. Transport information

DOT

UN Number:	UN 1219
UN Proper Shipping Name:	Isopropanol
Transport Hazard Class(es)	
Class:	3
Label(s):	3
Packing Group:	II
Marine Pollutant:	No
Special precautions for user:	Ltd. Qty

IMDG

UN Number:	UN 1219
UN Proper Shipping Name:	ISOPROPANOL
Transport Hazard Class(es)	
Class:	3
Subsidiary risk:	3
EmS No.:	F-E, S-D
Packing Group:	II
Environmental Hazards	
Marine Pollutant:	No
Special precautions for user:	Ltd. Qty

IATA

UN Number:	UN 1219
Proper Shipping Name:	Isopropanol
Transport Hazard Class(es):	
Class:	3
Subsidiary risk:	3
Packing Group:	II
Environmental Hazards	
Marine pollutant:	No
Special precautions for user:	EQ

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.

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CERCLA Hazardous Substance List (40 CFR 302.4):

Chemical Identity	Reportable quantity
2-Propanol	100 lbs.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Fire Hazard
Immediate (Acute) Health Hazards
Flammable (gases, aerosols, liquids, or solids)
Serious eye damage or eye irritation
Specific target organ toxicity (single or repeated exposure)
Hazards Not Otherwise Classified (HNOC)

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

SARA 304 Emergency Release Notification

Chemical Identity	Reportable quantity
2-Propanol	100 lbs.

SARA 311/312 Hazardous Chemical

Chemical Identity	Threshold Planning Quantity
2-Propanol	10000 lbs
D-Gluconic acid, compd. with N1,N14-bis(4-chlorophenyl)-3,12-diimino-2,4,11,13-tetraazatetradecanediimid amide (2:1)	10000 lbs

SARA 313 (TRI Reporting)

Chemical Identity	Reporting threshold for other users	Reporting threshold for manufacturing and processing
2-Propanol	10000 lbs	25000 lbs.

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
No ingredient requiring a warning under CA Prop 65.

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

Chemical Identity
2-Propanol

US. Massachusetts RTK - Substance List

Chemical Identity
2-Propanol

US. Pennsylvania RTK - Hazardous Substances

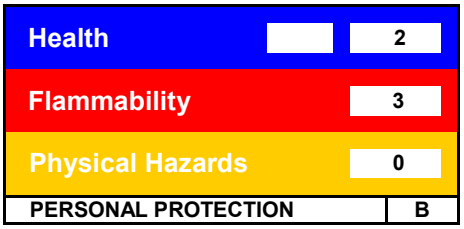
Chemical Identity
2-Propanol

US. Rhode Island RTK

Chemical Identity
2-Propanol

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

HMIS Hazard ID



B - Safety Glasses & Gloves

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible; *Chronic health effect

NFPA Hazard ID



Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible

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Revision Information:	
Further Information:	No data available.
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