



NEW DIRECTIONS AROMATICS

MATERIAL SAFETY DATA SHEET

SECTION: 1.1 PRODUCT IDENTIFICATION

Product Name: Liquid Germall Plus - Preservative
CAS Name: 1,2-Propanediol; Urea, N-(1,3-bis(hydroxymethyl)-2,5-dioxo-4-imidazolidinyl)-N,N'-bis (hydroxymethyl)-; Carbamic acid, butyl-, 3-iodo-2-propynyl ester
CAS Number: 57-55-6; 78491-02-8; 55466-53-6
Synonyms: Propylene Glycol; Diazolidinyl Urea; Iodopropynyl Butylcarbamate
Product Use: Preservative
Country of Origin: Canada

SECTION: 1.2 COMPANY IDENTIFICATION

Company: New Direction Aromatics Inc.
Address: 6781-Columbus Road, Mississauga. L5T 2G9 Canada
Telephone No: 905-362-1915
FAX: 905-362-1926

24 HOUR EMERGENCY TELEPHONE NUMBER: (613)-996-6666 CANUTEC

SECTION: 2. COMPOSITION / INFORMATION INGREDIENTS

Components:	Weight %	EU Classification	German MAK	UK OES/MEL
Urea, N-(1,3-bis(hydroxymethyl)-2,5-dioxo-4-imidazolidinyl)-N,N' bis (hydroxymethyl)-78491-02-8	40	NA	Not determined	Not determined

SECTION: 3. HAZARDS IDENTIFICATION

Risk Phrases: R52 - Harmful to aquatic organisms.
R53 - May cause long-term adverse effects in the aquatic environment.

Hazard Overview

Target Organs: Eyes / Skin
Primary Entry Routes: Eyes. Ingestion. Dermal - skin.
Acute Health Hazards: Causes mild eye irritation. Causes mild skin irritation.
Chronic Health Hazards: None known
Signs and Symptoms of Overexposure
Eye Contact: Causes mild eye irritation.
Skin Contact: Causes mild skin irritation.
Ingestion: Not a hazard under normal use conditions.
Inhalation: Not a hazard under normal use conditions.

SECTION: 4. FIRST AID MEASURES

Eye Contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.
Skin Contact: Immediately wash with soap and plenty of water. Remove contaminated clothing and launder before reuse. Get medical attention if symptoms occur.
Ingestion: Do not induce vomiting. Slowly dilute with 1-2 glasses of water or milk and seek medical attention. Never give anything by mouth to an unconscious person.
Inhalation: No specific treatment is necessary since material is not likely to be hazardous by inhalation. If exposed to excessive levels of dust or fumes, remove to fresh air and get medical attention if cough or other symptoms develop.



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SECTION: 5. FIRE FIGHTING MEASURES

Flash Point	210 °C
Extinguishing media:	All standard firefighting media
Special Procedures:	Determine the need to evacuate or isolate the area according to your local emergency plan.
Unusual Firefighting Hazards:	None identified.
Protective Equipment:	Fire fighters should wear full protective clothing, including self-contained breathing equipment.
Combustion Product:	Carbon Monoxide, Carbon Dioxide

SECTION: 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:	Use appropriate protective equipment.
Safety Precautions:	Eliminate all ignition sources. Ventilate area. Determine the need to evacuate or isolate the area according to your local emergency plan.
Environmental Precautions:	Keep away from drains, surface and ground water. Report spills to appropriate Authorities if required.
Methods For Cleaning Up:	Contain spill with sand or other inert materials. Comply with all federal, state, and local regulation.

SECTION: 7. HANDLING AND STORAGE

Handling:	Avoid contact with skin and eyes. May produce sensitization to damaged exposed skin (as sold) (See Toxicological Section 11). Wear appropriate PPE. Wash thoroughly with soap and water after handling.
Storage:	Keep containers tightly closed when not in use. Store in a cool, dry place, out of direct sunlight. Hygroscopic Material. Keep containers closed tightly when not in use.

SECTION: 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Eyes Protection:	The use of safety glasses is recommended.
Engineering Controls:	Use in a well ventilated area.
Respiratory Protection:	In well- ventilated areas, respiratory protection is not normally required.
Protective Gloves:	Using chemical resistant gloves is recommended.
Protective Clothing:	Using chemical resistant clothing is recommended.
Protective Equipment:	An eyewash fountain and / or safety shower should be available in the work area. Acceptable industrial hygiene practices should be maintained.

SECTION: 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Liquid
Odor:	Odorless
Solubility:	Soluble in Water
Relative Density:	Not determined
Refractive Index:	Not determined
pH	N/A
Boiling Point	378 °F
Melting Point	-83 °F
Vapor Pressure	0.072 mmHg@20°C



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SECTION: 10. STABILITY AND REACTIVITY

Stability:	Chemically stable under normal conditions and handling, use and transportations
Hazardous Polymerization:	Will not occur.
Conditions to Avoid	None known.
Decomposition Products:	When heated to decomposition produces carbon dioxide and monoxide smoke.

SECTION: 11. TOXICOLOGICAL INFORMATION

***Toxicity Test:**

Acute Oral LD50 (mg/kg):

2,570 (Diazolidinyl urea), 1,470 (IPBC), 20,000 (Propylene Glycol)

Acute Dermal LD50 (mg/kg):

>2,000 (Diazolidinyl urea), >2,000 (IPBC), 31,000 (Propylene Glycol)

Acute Inhalation LC50 (mg/l):

1.3 mg/kg (rat, 50% aqueous solution), 670 (IPBC dust), 630 (IPBC as liquid aerosol)

Sensitization:

Non-sensitizing (0.5% aqueous solution)(Human RIPT) (Diazolidinyl urea), Non-sensitizing to guinea pigs (0.1% aqueous solution) (Diazolidinyl urea), Slight sensitizer to guinea skin in Guinea Pig Maximization Test (5% aqueous solution injection) (Diazolidinyl urea), Non-sensitizing (0.1% aqueous solution) (Germall Plus)

Mutagenicity:

Non-mutagenic (Ames assay, Mouse micronucleus test, Rat hepatocyte DNA repair assay) (IPBC)

Non-mutagenic (Ames assay). (Diazolidinyl urea)

Non-mutagenic (In-Vitro Chromosomal Aberration- Chinese hamster ovary cells) (Diazolidinyl urea)

Non-mutagenic (In-Vitro rat hepatocytes/DNA Repair Assay) (Diazolidinyl urea).

Non-mutagenic (Propylene Glycol)

Reproductive/Developmental Toxicity:

Rat 42 weeks; 120, 300, 750 mg/kg/day NOAEL= 120 mg/kg/day (IPBC)

Rat 9 days; 20, 50, 125 mg/kg/day NOAEL= 50 mg/kg/day (IPBC)

Rat 14 weeks; 120, 300, 750 mg/kg/day NOAEL= 120 mg/kg/day (P & F1 generations) (IPBC)

Mouse 9 days; 20, 50, 125 mg/kg/day NOAEL= 50 mg/kg/day (IPBC)

Mouse 9 days; 20, 50, 125 mg/kg/day NOAEL 125 mg/kg/day (Maternal and Reproductive toxicity) (IPBC)

Mouse 9 days; 20, 50, 125 mg/kg/day NOAEL for Maternal= 50 mg/kg/day & 125 mg/kg/day for Repro (IPBC)

Rat 9 days; 20, 50 125 mg/kg/day NOAEL= 50 mg/kg/day for Maternal & Repro (IPBC).

Teratogenicity:

Non-teratogenic in rats dosed orally with 125, 250 or 500 mg/kg day.

Nonteratogenic in rats receiving dermally 30-300 mg/kg/day from days 6-15 of gestation. (Diazolidinyl urea) Non-teratogenic (Propylene Glycol)

Carcinogenicity:

No evidence of carcinogenic potential. Rat 100 weeks; 20, 40,80 mg/kg/day NOAEL=20 mg/kg/day (IPBC)

Skin Irritation:

Mildly irritating to human skin (Propylene glycol). Slightly irritating to rabbit skin (0.0125% IPBC in sunscreen formulation)

Practically non-irritating to rabbit skin (IPBC) Non-irritating to human skin (0.5% aqueous solution, Diazolidinyl urea)

Non-irritating to rabbit (5% aqueous solution) and guinea pig skin (100% wettable powder) (Diazolidinyl urea)

Non irritating (Human RIPT). (1.0% aqueous solution, Diazolidinyl urea & IPBC)

Eye Irritation:



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Mildly irritating to rabbit eye (Propylene glycol)
Mildly irritating to rabbit eye (50% aqueous solution) (Diazolidinyl urea)
Non-irritating to rabbit eye (1 & 5 % aqueous solutions) (Diazolidinyl urea)
Moderately irritating to rabbit eye with washout
Severely irritating to rabbit eye without washout (IPBC)

Other Information:

Phototoxicity: Non-phototoxic (0.015% IPBC)
Non-photoallergic (0.2ml, 100% IPBC)
Phototoxicity: Non-phototoxic (0.5% Diazolidinyl urea)
Comedogenicity; Non-Comedogenic (0.1% IPBC in white cream, 0.01% moisturizing gel).
Subchronic Oral Toxicity: Rats fed diets containing 0-50,000 ppm of Propylene Glycol for 15 weeks. The Propylene Glycol in the feed corresponded to a dose of 2.5g/kg/day. No significant differences were found between the control & Propylene Glycol dosed animals.
Rat 28 day: 60, 125, 250 mg/kg/day; NOAEL= 60 mg/kg/day (IPBC)
Rat 90 day: 20, 50, 125 mg/kg/day; NOAEL= 20 mg/kg/day (IPBC)
Rat 90 day: 20, 50, 125 mg/kg/day; NOAEL (Females)= 125 mg/kg/day; NOAEL (Males)= 50 mg/kg/day (IPBC)
Subchronic Oral Toxicity: Rat 90; 10, 25, 100 mg/kg/day - no observed adverse effect level (NOAEL) 100 mg/kg/day (Diazolidinyl urea)
28day; 100, 300, 900 mg/kg. no observed adverse effect level (NOAEL) 100 mg/kg/day (Diazolidinyl urea)

*Data provided by supplier

SECTION: 12. ECOLOGICAL INFORMATION

Biodegradability: N/A
Aquatic Toxicity: Daphnia Magna, 48 hr. EC50: 34.9 mg/L; NOEL 21.6 mg/L
Bluegills, 96 hr. LC50: >100 mg/L; NOEL 60mg/L
Rainbow trout, 96 hr. LC50: >100 mg/L; NOEL 100 mg/L
Acute Oral LD50: >2,250 mg/kg (Northern bobwhite).
5-Day subacute dietary studies produced no evidence of toxicity at concentrations up to 5,620 ppm. (Diazolidinyl urea)

SECTION: 13. DISPOSAL CONSIDERATION

Follow all applicable community, national or regional regulations regarding waste management methods.

SECTION: 14. TRANSPORT INFORMATION

TDG Canada
Proper Shipping Name Not Regulated
Hazard Class None
US DOT Shipping Description: Check appropriate authority
IATA Shipping (Air): Check appropriate authority
IMDG Shipping Description: Check appropriate authority

SECTION: 15. REGULATORY INFORMATION

WHMIS (Canada): Not Available
HMIS (USA): Health Hazard –N/A Fire Hazard – N/A Reactivity – N/A
Classification:
Risk Phrases: R52 - Harmful to aquatic organisms.
R53 - May cause long-term adverse effects in the aquatic environment.
Safety Phrases: S57 - Use appropriate containment to avoid environmental



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	contamination.
	S61 - Avoid release to the environment.
	Refer to special instructions/Safety data sheets.
TSCA Inventory List:	This product and/or its components is listed on TSCA.
California Proposition 65 Carcinogens & Reproductive Toxicity (CRT) List:	None of the components of this product is listed on CALPROP.
Canada DSL Inventory List:	This product and/or its components are listed on DSL.
Canada NDSL Inventory List:	This product and/or its components is not listed on NDSL.
EU EINECS List:	This product and/or its components is listed on EINECS.
EU ELINCS List:	This product and/or its components is not listed on ELINCS.
Germany VCI Assigned Classification into Water Endangering Classes (WGK) List:	This product and/or its components is not listed on WGK.
Japan Inventory of Existing & New Chemical Substances(ENCS):	This product and/or its components is not listed on ENCS.
Australia Inventory of Chemical Substances (AICS) List:	This product and/or its components is listed on AICS.

SECTION: 16. OTHER INFORMATION

Revision Date: September 9, 2011

SECTION: 17. DISCLAIMER

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CERTIFICATE OF ANALYSIS

Product: Liquid Germall Plus Preservative
Lot No.: 33007-A25/B25
Manufacturing Date: October, 2010
Best Before: October, 2012

<u>Property</u>	<u>Specification</u>	<u>Result</u>
Appearance:	Colorless, Liquid	Complies
Odor:	Characteristics	Complies
Solubility:	Soluble in Water	Complies
Specific Gravity @ 25°C	1.15 – 1.25	1.20

DISCLAIMER:

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A R O M A T I C S

CERTIFICATE OF ANALYSIS

Product: Liquid Germall Plus Preservative
Lot No.: 33007-A26/B26
Manufacturing Date: February, 2011
Best Before: February, 2013

<u>Property</u>	<u>Specification</u>	<u>Result</u>
Appearance:	Colorless, Liquid	Complies
Odor:	Characteristics	Complies
Solubility:	Soluble in Water	Complies
Specific Gravity @ 25°C	1.15 – 1.25	1.20

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