



SAFETY DATA SHEET

GERMALL PLUS LIQUID

1. PRODUCT INFORMATION AND COMPANY IDENTIFICATION

Product Name: Germall Plus Liquid
INCI Name: Diazolidinyl Urea, 3-Iodo-2-Propynyl Butyl Carbamate
CAS Number: 78491-02-8, 55406-53-6
Recommended Use: Preservative
Company: Chemistry Connection
253 Sturgis Rd
Conway, AR 72034
(501) 470-9689

Emergency Phone Number

Emergency: Chemtrec: 800-424-9300

2. HAZARD IDENTIFICATION

GHS Classification

Eye irritation : Category 2A

Skin sensitization : Category 1

GHS Label element

Hazard pictograms :



Signal Word : Warning

Hazard Statements : May cause an allergic skin reaction.
Causes serious eye irritation.

Precautionary Statements : **Prevention:**
Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
Wash skin thoroughly after handling.
Contaminated work clothing must not be allowed out of the workplace.

Wear eye protection/ face protection.
Wear protective gloves.
Response:
IF ON SKIN: Wash with plenty of soap and water.
IF IN EYES: Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue rinsing.
If skin irritation or rash occurs: Get medical advice/ attention.
If eye irritation persists: Get medical advice/ attention.
Wash contaminated clothing before reuse.
Disposal:
Dispose of contents/ container to an approved waste disposal plant.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

Chemical Name	CAS-No.	Classification	Concentration (%)
DIAZOLIDINYL UREA	78491-02-8	Eye Irrit. 2A; H319	39.56
3-iodo-2-propynyl butyl carbamate	55406-53-6	Acute Tox. 4; H302 Acute Tox. 2; H330 Eye Dam. 1; H318 Skin Sens. 1; H317 STOT SE 3; H335	0.50

4. FIRST AID MEASURES

General advice : Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.

If inhaled : If breathed in, move person into fresh air.

If unconscious place in recovery position and seek medical advice.
If symptoms persist, call a physician.

In case of skin contact : Remove contaminated clothing. If irritation develops, get medical attention.
If on skin, rinse well with water.
First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water.
Wash contaminated clothing before re-use.

In case of eye contact	: Immediately flush eye(s) with plenty of water. Remove contact lenses. Protect unharmed eye.
If swallowed	: Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.
Most important symptoms and effects, both acute and delayed	: No symptoms known or expected. May cause an allergic skin reaction. Causes serious eye irritation.
Notes to physician	: No hazards which require special first aid measures.

5. FIRE FIGHTING MEASURES

Suitable extinguishing media	: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Water spray Foam Carbon dioxide (CO ₂) Dry chemical
Unsuitable extinguishing media	: High volume water jet
Specific hazards during firefighting	: If product is heated above its flash point it will produce vapors sufficient to support combustion. Vapors are heavier than air and may travel along the ground and be ignited by heat, pilot lights, other flames and ignition sources at locations near the point of release. Do not allow run-off from fire fighting to enter drains or water courses.
Hazardous combustion products	: carbon dioxide and carbon monoxide organic compounds Carbon dioxide (CO ₂) Product is compatible with standard fire-fighting agents.
Further information	: Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Special protective equipment for firefighters	: In the event of fire, wear self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	: Use personal protective equipment. Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.
Environmental precautions	: Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.
Methods and materials for containment and cleaning up	: Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal.
Other information	: Comply with all applicable federal, state, and local regulations.

7. HANDLING AND STORAGE

Advice on safe handling	: Do not breathe vapours/dust. Do not smoke. Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used. Container hazardous when empty. Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. Smoking, eating and drinking should be prohibited in the application area. For personal protection see section 8. Dispose of rinse water in accordance with local and national regulations.
Conditions for safe storage	: Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Electrical installations / working materials must comply with the technological safety standards.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Engineering measures : Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Personal protective equipment

Hand protection

Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection

: Wear chemical splash goggles when there is the potential for exposure of the eyes to liquid, vapor or mist.

Skin and body protection

: Wear as appropriate:
impervious clothing
Safety shoes
Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Discard gloves that show tears, pinholes, or signs of wear.
Wear resistant gloves (consult your safety equipment supplier).

Hygiene measures

: Wash hands before breaks and at the end of workday.
When using do not eat or drink.
When using do not smoke.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state : liquid

Colour : colourless

Odour : characteristic

Odour Threshold : No data available

pH : No data available

Melting point/freezing point : -83.00 °F / -63.89 °C

Boiling point/boiling range : 378.00 °F / 192.22 °C

Flash point	: 210.00 °F / 98.89 °C
Evaporation rate	: No data available
Flammability (solid, gas)	: No data available
Upper explosion limit	: No data available
Lower explosion limit	: No data available
Vapour pressure	: 0.09576 hPa (20 °C)
Relative vapour density	: No data available
Relative density	: No data available
Density	: 1.15 - 1.25 g/cm ³ (20 °C)
Solubility(ies)	
Water solubility	: soluble
Solubility in other solvents	: No data available
Partition coefficient: n-octanol/water	: No data available
Thermal decomposition	: No data available
Viscosity	
Viscosity, dynamic	: No data available
Viscosity, kinematic	: No data available
Oxidizing properties	: No data available

10. STABILITY AND REACTIVITY

Reactivity	: No decomposition if stored and applied as directed.
Chemical stability	: Stable under recommended storage conditions.
Possibility of hazardous reactions	: Product will not undergo hazardous polymerization.
Conditions to avoid	: excessive heat Exposure to sunlight. Exposure to moisture
Incompatible materials	: isocyanates Strong acids strong bases Strong oxidizing agents UV light.
Hazardous decomposition products	No hazardous decomposition products are known.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure	: Inhalation Skin contact Eye Contact Ingestion
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Acute toxicity

Not classified based on available information.

Components:**DIAZOLIDINYL UREA:**

Acute oral toxicity : LD 50 (Rat): > 2,000 mg/kg

Acute dermal toxicity : LD 50 (Rabbit): > 2,000 mg/kg

3-iodo-2-propynyl butyl carbamate:

Acute oral toxicity : LD50 (Rat): 1,153 mg/kg

Acute inhalation toxicity : LC50 (Rat): 0.327 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rat): > 5,000 mg/kg

Skin corrosion/irritation

Not classified based on available information.

Product:

Remarks: May cause skin irritation in susceptible persons.

Components:

DIAZOLIDINYL UREA:

Result: Not irritating to skin

3-iodo-2-propynyl butyl carbamate:

Result: Mildly irritating to skin

Serious eye damage/eye irritation

Causes serious eye irritation.

Product:

Remarks: Vapours may cause irritation to the eyes, respiratory system and the skin., Causes serious eye irritation.

DIAZOLIDINYL UREA:

Result: Irritating to eyes

3-iodo-2-propynyl butyl carbamate:

Result: Corrosive to eyes

Respiratory or skin sensitisation

Skin sensitisation: May cause an allergic skin reaction.

Respiratory sensitisation: Not classified based on available information.

Components:

DIAZOLIDINYL UREA:

Test Type: Maximisation Test (GPMT)

Species: Guinea pig

Assessment: Did not cause sensitisation on laboratory animals.

3-iodo-2-propynyl butyl carbamate:

Assessment: May cause sensitization by skin contact.

Germ cell mutagenicity

Not classified based on available information.

Components:

DIAZOLIDINYL UREA:

Genotoxicity in vitro

- : Test Type: Ames test
Metabolic activation: with and without metabolic activation
Result: negative
- : Test Type: Chromosome aberration test in vitro
Metabolic activation: with and without metabolic activation
Result: negative

Genotoxicity in vivo : Test Type: In vivo micronucleus test
Test species: Mouse (male and female)
Application Route: Oral
Method: Mutagenicity (micronucleus test)
Result: negative

Application Route: Oral
Method: OECD Test Guideline 486
Result: negative

Carcinogenicity

Not classified based on available information.

Reproductive toxicity

Not classified based on available information.

Components:

DIAZOLIDINYL UREA:

Effects on foetal development : Test Type: Embryo-foetal development
Species: Rat
Application Route: Oral
Dose: 500 milligram per kilogram

STOT - single exposure

Not classified based on available information.

Components:

3-iodo-2-propynyl butyl carbamate:

Target Organs: Respiratory Tract

Assessment: May cause respiratory irritation.

STOT - repeated exposure

Not classified based on available information.

Repeated dose toxicity

Components:

DIAZOLIDINYL UREA:

Species: Rat, male and female

NOEL: 200 mg/kg

Application Route: Oral

Exposure time: 90-day

Aspiration toxicity

Not classified based on available information.

Product:

No aspiration toxicity classification

Further information

Product:

Remarks: No data available

Carcinogenicity:

IARC

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

DIAZOLIDINYL UREA:

Toxicity to fish

: LC 50 (Fish): > 100 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates

: EC50 (Daphnia magna (Water flea)): 58 mg/l
Exposure time: 48 h
Test Type: flow-through test

Toxicity to algae : ErC50 (Green algae (*Selenastrum capricornutum*)): 5.78 mg/l
 End point: EC 50
 Exposure time: 72 h
 Test Type: Growth inhibition
 Analytical monitoring: yes

3-iodo-2-propynyl butyl carbamate:

Toxicity to fish : LC50 (*Oncorhynchus mykiss* (rainbow trout)): 0.067 mg/l
 Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (*Daphnia magna* (Water flea)): 0.16 mg/l
 Exposure time: 48 h

Toxicity to algae : EC 50 (*Desmodesmus subspicatus* (green algae)): 0.022 mg/l
 Exposure time: 72 h

M-Factor (Acute aquatic toxicity) : 10

Persistence and degradability

Components:

DIAZOLIDINYL UREA:

Biodegradability : Biodegradation: 24 %
 Exposure time: 28 d
 Remarks: Not readily biodegradable.

Stability in water : Degradation half life(DT50): 12 h (20.4 °C) pH: 7

Bioaccumulative potential

Components:

DIAZOLIDINYL UREA:

Bioaccumulation : Remarks: The substance has low potential for bioaccumulation.

Partition coefficient: n-octanol/water : log Pow: 0.9 (20 °C)

3-iodo-2-propynyl butyl carbamate:

Bioaccumulation : Species: *Cyprinus carpio* (Carp)
 Bioconcentration factor (BCF): 4.5
 Remarks: Bioaccumulation is unlikely.

Partition coefficient: n-octanol/water : log Pow: 2.81

Mobility in soil**Components:**

DIAZOLIDINYL UREA:

Distribution among environmental compartments : Adsorption/Soil
Medium: Soil
Koc: < 2

Other adverse effects**Product:**

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal., Toxic to aquatic life.

Components:

DIAZOLIDINYL UREA:

Results of PBT and vPvB assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

13. DISPOSAL CONSIDERATIONS**Disposal methods**

General advice : The product should not be allowed to enter drains, water courses or the soil.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company.

Dispose of in accordance with all applicable local, state and federal regulations.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Empty containers should be taken to an approved waste handling site for recycling or disposal.
Do not re-use empty containers.

14. TRANSPORT INFORMATION**International transport regulations****REGULATION**

ID NUMBER	PROPER SHIPPING NAME	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT / LTD. QTY.

MEXICAN REGULATION FOR THE LAND TRANSPORT OF HAZARDOUS MATERIALS AND WASTES

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

Not dangerous goods

INTERNATIONAL MARITIME DANGEROUS GOODS

Not dangerous goods

TRANSPORT CANADA - INLAND WATERWAYS

Not dangerous goods

TRANSPORT CANADA - RAIL

Not dangerous goods

TRANSPORT CANADA - ROAD

Not dangerous goods

U.S. DOT - INLAND WATERWAYS

Not dangerous goods

U.S. DOT - RAIL

Not dangerous goods

U.S. DOT - ROAD

Not dangerous goods

*ORM = ORM-D, CBL = COMBUSTIBLE LIQUID

Marine pollutant	no
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Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

15. REGULATORY INFORMATION**SARA 311/312 Hazards** : Acute Health Hazard

US State Regulations**Pennsylvania Right To Know**

PROPYLENE GLYCOL	57-55-6	50.00 - 70.00
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The identity of one or more component(s) is being withheld under business confidentiality.

DIAZOLIDINYL UREA	78491-02-8	30.00 - 50.00 %
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New Jersey Right To Know

PROPYLENE GLYCOL	57-55-6	50.00 - 70.00
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The identity of one or more component(s) is being withheld under business confidentiality.

DIAZOLIDINYL UREA	78491-02-8	30.00 - 50.00 %
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California Prop 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

The components of this product are reported in the following inventories:

TSCA	: On TSCA Inventory
DSL	: All components of this product are on the Canadian DSL.
AUSTR	: On the inventory, or in compliance with the inventory
ENCS	: Not in compliance with the inventory
KECL	: On the inventory, or in compliance with the inventory
PICCS	: On the inventory, or in compliance with the inventory
IECSC	: On the inventory, or in compliance with the inventory

Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

16. OTHER INFORMATION

All statements, technical information and recommendations contained herein are based on tests and data which Chemistry Connection believes to be currently reliable, but this accuracy or completeness thereof is not guaranteed and no warranty of any kind is made with respect thereto. This information is not intended as a license to operate under or a recommendation to practice or infringe any patent of this company or others covering any process, composition of matter or use. Since we shall have no control of the use of the product described here in, we assume no Liability for loss or damage incurred from the proper or improper use of such product.