

Glycol Ether DPNB

Version 1.4

Revision Date 08/11/2022

Print Date 08/24/2022

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Trade name : Glycol Ether DPNB
CAS Number: : 29911-28-2
Chemical characterization : Aliphatic Propylene Glycol Ethers
Chemical name : 2-Propanol, 1-(2-butoxy-1-methylethoxy)-
Synonyms : Dipropylene Glycol Butoxy Ether, Dipropylene Glycol Monobutyl Ether, DPNB

Identified uses : Solvent

Company Address

Silver Fern Chemical, Inc
121 W. De La Guerra Street, Suite B
Santa Barbara, CA 93101 USA

Customer Service

Phone: 1-866-282-3384
Email: info@silverfernchemical.com
Website: www.silverfernchemical.com

Emergency telephone number

Infotrac 1-800-535-5053 (USA & Canada)
Outside USA & Canada 1-352-323-3500

2. HAZARDS IDENTIFICATION

GHS Classification

Specific target organ toxicity - single exposure

Category 3

Label elements

Hazard symbols :



Signal word : Warning

Hazard Statements : H336 May cause drowsiness or dizziness.

Precautionary Statements : **Prevention**
P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P271 Use only outdoors or in a well-ventilated area.

Silver Fern Chemical SAFETY DATA SHEET

Glycol Ether DPNB

Version 1.4

Revision Date 08/11/2022

Print Date 08/24/2022

Response

P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P312 Call a POISON CENTER/ doctor if you feel unwell.

Storage

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

Disposal

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

No additional information available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances

Chemical nature : Substance

Components

Chemical name	CAS-No. EC-No.	Weight %	Component Type
Dipropylene Glycol Butyl Ether	29911-28-2	>= 99.0 %	A

Key:

(A) Substance

4. FIRST AID MEASURES

General advice : Consult a physician/doctor if necessary.
Take proper precautions to ensure your own health and safety before attempting rescue and providing first aid.
Show this material safety data sheet to the doctor in attendance.

If inhaled : Remove to fresh air.
Keep patient warm and at rest.
In case of respiratory arrest, administer artificial respiration.
In the event of unconsciousness, apnea or cardiac arrest (no pulse), apply cardiopulmonary resuscitation.

Silver Fern Chemical SAFETY DATA SHEET

Glycol Ether DPNB

Version 1.4

Revision Date 08/11/2022

Print Date 08/24/2022

Obtain emergency medical attention.

- | | |
|-------------------------|---|
| In case of skin contact | : Remove contaminated clothing and shoes.
Wash skin thoroughly with soap and water or use recognized skin cleanser.
Seek medical attention if discomfort persists. |
| In case of eye contact | : Flush with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids.
Remove contact lenses.
If eye irritation persists, consult a specialist. |
| If swallowed | : Rinse mouth with lukewarm water.
If large quantity swallowed, give lukewarm water (pint/ 1/2 liter) if victim completely conscious/alert.
Do not induce vomiting. Risk of damage to lungs exceeds poisoning risk.
If vomiting does occur, have victim lean forward to reduce risk of aspiration.
If unconscious, place in recovery position and seek medical advice.
Obtain emergency medical attention. |

Notes to physician

- | | |
|-----------|---|
| Hazards | : May be harmful if swallowed and enters airways.
May be harmful if swallowed.
May cause drowsiness or dizziness. |
| Treatment | : Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient. |

5. FIRE-FIGHTING MEASURES

- | | |
|---------------------------------------|---|
| Suitable extinguishing media | : SMALL FIRE: Use dry chemicals, CO2, water spray or alcohol-resistant foam
LARGE FIRE: Use water spray, water fog or alcohol-resistant foam |
| Unsuitable extinguishing media | : Do not use solid water stream. |
| Specific hazards during fire fighting | : Fine sprays/mists may be combustible at temperatures below normal flash point. |

Silver Fern Chemical SAFETY DATA SHEET

Glycol Ether DPNB

Version 1.4

Revision Date 08/11/2022

Print Date 08/24/2022

Heat from fire can generate flammable vapor.
Vapors may be heavier than air.
Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
Move containers from fire area if it can be done without risk.
Cool containers with flooding quantities of water until well after fire is out.
Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
Always stay away from tanks engulfed in fire.

Special protective equipment for fire-fighters : Wear positive pressure self-contained breathing apparatus (SCBA).
Structural firefighter's protective clothing will only provide limited protection.

Further information : Cool containers with flooding quantities of water until well after fire is out.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions : Use personal protective equipment.
Ensure adequate ventilation.
Eliminate all sources of ignition.
Evacuate personnel to safe areas.

Environmental precautions : Chemical removal by air and water pollution control devices must meet the minimum efficiency requirements needed to reduce exposures to an acceptable level.
If necessary, all contaminated waste water must be treated in a municipal or industrial wastewater treatment plant before release to surface water.

Methods for containment /
Methods for cleaning up : Eliminate all sources of ignition.
Do not touch or walk through spilled material.
Stop leak if you can do it without risk.
Prevent entry into waterways, sewers, basements or confined areas.
A vapor suppressing foam may be used to reduce vapors.
Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.

Additional advice : Keep non-involved personnel away from the area of spillage.
See section 8 for additional PPE information.
See section 13 for disposal information.
See Section 15: Regulatory Information.

Glycol Ether DPNB

Version 1.4

Revision Date 08/11/2022

Print Date 08/24/2022

7. Handling and storage

Precautions for safe handling

Advice on safe handling : For industrial use only.
Keep container tightly closed when not in use.
The potential for peroxide formation is enhanced when this solvent is used in processes such as distillation.
Use only non-sparking tools.
Properly ground containers before beginning transfer.
When transferring propylene glycol ethers with flash points at or below 60 °C (140 °F) into fixed site vessels, the vessel should be purged and inerted prior to transfer.
Propylene glycol ethers may be transferred into air atmospheres if the temperature of the product and the ambient temperature within the shipping container are both at least 16.7 °C (30 °F) less than the product's flash point. After loading, nitrogen blanketing is required if the contents of the transportation container could exceed a temperature of 16.7 °C (30 °F) less than the product flash point during any subsequent transportation activities.
If the product flash point is less than 16.7 °C (30 °F) above either the ambient temperature of the transportation container or the storage temperature of the product, the container should be purged and inerted with nitrogen prior to loading and nitrogen blanketed after loading.
Handle empty containers with care.
Flammable/combustible residue remains after emptying. Isolate, vent, drain, wash and purge systems or equipment before maintenance or repair.
Use adequate personal protective equipment.
Observe precautions pertaining to confined space entry.

Advice on protection against fire and explosion : Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors).

Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Store in properly lined steel/stainless steel to avoid slight discoloration from mild steel/copper.
Some plastics/rubbers are attacked by Glycol Ethers/Ether Esters.
This product will absorb water if exposed to air.
Storage under nitrogen atmosphere is recommended to minimize possible formation of highly reactive peroxides.
Store only in tightly closed, properly vented containers away from heat, sparks, open flame and strong oxidizing agents.

Further information on : Keep away from sources of ignition - No smoking.

Glycol Ether DPNB

Version 1.4

Revision Date 08/11/2022

Print Date 08/24/2022

storage conditions

Other data

: Stable under recommended storage conditions.

Specific end use(s)

: See Section 1.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Ingredients with workplace control parameters

Consult local authorities for acceptable exposure limits.

Exposure controls

Engineering measures

Both local exhaust and general room ventilation are usually required.

If handling results in mist/aerosol and/or high temperatures, special ventilation may be required to avoid exceeding exposure standard and/or to prevent flammable mixtures, which can form below flash point.

Personal protective equipment

Respiratory protection : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
If exposure can even approach the occupational exposure limit(s), use only approved supplied air respirator operated in a positive pressure mode.

Hand protection : Wear chemical resistant gloves such as:
Neoprene.

Eye and face protection : Eye protection such as chemical splash goggles and/or face shield must be worn when possibility exists for eye contact due to splashing or spraying liquid, airborne particles, or vapor.

Skin and body protection : Not normally considered a skin hazard.
Where use can result in skin contact, practice good personal hygiene.
Skin should be washed after contact.

Hygiene measures : Selection of appropriate personal protective equipment should be based on an evaluation of the performance characteristics of the protective equipment relative to the task(s) to be performed, conditions present, duration of use, and the

Silver Fern Chemical SAFETY DATA SHEET

Glycol Ether DPNB

Version 1.4

Revision Date 08/11/2022

Print Date 08/24/2022

hazards and/or potential hazards that may be encountered during use.

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Use good personal hygiene practices.

Take off contaminated clothing and wash before reuse.

Shower after work using plenty of soap and water.

Protective measures : Do not wear contact lenses.
Ensure adequate ventilation.
Wear suitable protective equipment.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: liquid
Color	: Clear, colorless.
Odor	: Ether-like odor.
Odor Threshold	: no data available
Flash point	: ~ 100 °C at 1,013 hPa (760 mm Hg) Method: (SETA)
Ignition temperature	: 194 °C at 1,013.25 hPa
Lower explosion limit	: 0.6 vol%
Upper explosion limit	: 20 vol%
Flammability (solid, gas)	: Not applicable
Oxidizing properties	: Not considered an oxidizing agent.
Autoignition temperature	: 194 °C at 1,013 hPa
Molecular weight	: 190.27 g/mol
Decomposition temperature	: not determined
pH	: 7
Melting point/freezing point	: < -75 °C at 1,013 hPa
Boiling point/boiling range	: 230 °C

Glycol Ether DPNB

Version 1.4

Revision Date 08/11/2022

Print Date 08/24/2022

	at 1,013 hPa
Vapor pressure	: < 0.04 hPa at 20 °C
Density	: 0.910 g/cm ³ at 20 °C
Water solubility	: 40 - 45 g/l 25 °C soluble
Partition coefficient: n-octanol/water	: log Pow: 1.523 at 25 °C Log Kow = 1.5
Viscosity, dynamic	: 4.35 mPa.s at 25 °C
Viscosity, kinematic	: 4.85 mm ² /s at 25 °C
Relative vapor density	: ~ 6.6 (Air = 1.0 at 15 - 20°C/59 - 68°F)
Evaporation rate	: no data available
Explosive properties	: Not explosive
Other Information	: Hygroscopic.

10. STABILITY AND REACTIVITY

Reactivity	: May react with oxygen to form peroxides.
Chemical stability	: Stable under recommended storage conditions.
Hazardous reactions	: Will not occur.
Conditions to avoid	: Extended contact with air or oxygen. The potential for peroxide formation is enhanced when this solvent is used in processes such as distillation. Heat, sparks, open flame, other ignition sources, and oxidizing conditions. Ignition may occur at temperatures below those published in the literature as autoignition or ignition temperatures.
Materials to avoid	: Air or oxygen. Strong acids. Strong oxidizing agents.

Glycol Ether DPNB

Version 1.4

Revision Date 08/11/2022

Print Date 08/24/2022

Hazardous decomposition products : Not expected to decompose under normal conditions.
Thermal decomposition : Thermal decomposition may produce carbon monoxide and other toxic vapors., Incomplete combustion may produce carbon monoxide and other toxic gases.

11. TOXICOLOGICAL INFORMATION

Product Summary : The below given information is based on the assessment of the product including impurities.

Acute toxicity

Acute oral toxicity : Based on acute toxicity values, not classified.
: May be harmful if swallowed.
: LD50: 3,160 mg/kg
Species: Rat

Acute inhalation toxicity : Based on acute toxicity values, not classified.
No mortality observed at this dose.
: LC50: > 5.4 mg/l
Exposure time: 4 HOURS
Species: Rat

Acute dermal toxicity : Based on acute toxicity values, not classified.
: LD50 Dermal: > 2,000 mg/kg
Species: Rat

Skin corrosion/irritation : Based on skin irritation values, not classified.
: May cause slight transient skin irritation.

Serious eye damage/eye irritation : Based on eye irritation values, not classified.
: May cause slight transient eye irritation.

Respiratory or skin sensitization : Respiratory sensitization
Not classified
No study available.

Glycol Ether DPNB

Version 1.4

Revision Date 08/11/2022

Print Date 08/24/2022

: Skin sensitization
Not classified
No adverse effect observed.

Chronic toxicity

Carcinogenicity : Not classified
No study available.

Not listed by IARC, NTP, OSHA or EPA.

Germ cell mutagenicity : Not classified
No adverse effect observed.
Both positive and negative clastogenic effects were observed in vitro. No evidence of mutation in bacterial assays and no genotoxicity observed in vivo.

Reproductive toxicity

Effects on fertility / : Not classified
Effects on or via lactation No adverse effect observed.

Effects on Development : Not classified
No adverse effect observed.

Target Organ Systemic Toxicant - Single exposure : Classified, May cause drowsiness or dizziness.

Target Organ Systemic Toxicant - Repeated exposure : Based on repeated exposure toxicity values, not classified.

Aspiration hazard : Not classified
May be harmful if swallowed and enters airways.

12. Ecological information

Ecotoxicology Assessment

Short-term (acute) aquatic hazard : Based on acute aquatic toxicity values, not classified.

Long-term (chronic) : Not classified, based on readily biodegradability and low acute

Silver Fern Chemical SAFETY DATA SHEET

Glycol Ether DPNB

Version 1.4

Revision Date 08/11/2022

Print Date 08/24/2022

aquatic hazard

toxicity.

Toxicity to fish

: Low acute toxicity to fish

Toxicity to daphnia and other aquatic invertebrates

: Low acute toxicity to aquatic invertebrates.

Toxicity to algae

: Low toxicity to algae.

Toxicity to bacteria

: Low toxicity to sewage microbes.

Toxicity to fish (Chronic toxicity)

: no data available

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)

: no data available

Persistence and degradability

Biodegradability

: Biodegradation: 90 - 100 %
Rapidly degradable.
(After 28 days in a ready biodegradability test)

Bioaccumulative potential

Bioaccumulation

: Bioconcentration factor (BCF): 2.57
This material is not expected to bioaccumulate.

Mobility in soil

Distribution among environmental compartments

: Type: Stability in water
Not expected to hydrolyze readily.

: Type: Stability in soil
no data available
Low absorption to soil particulates predicted

Other adverse effects

Environmental fate and pathways

: No additional information available.

Other information

Additional ecological information

: No additional information available.

Glycol Ether DPNB

Version 1.4

Revision Date 08/11/2022

Print Date 08/24/2022

13. Disposal considerations

Waste treatment methods

- Product : Contaminated product, soil, water, container residues and spill cleanup materials may be hazardous wastes.
Comply with applicable federal, state, and local regulations.
Comply with applicable local, state or international regulations concerning solid or hazardous waste disposal and/or container disposal.
Dispose of wastes in an approved waste disposal facility.
Assure emissions comply with applicable regulations.
Avoid overloading/poisoning plant biomass.
Landfill at permitted sites.
Use registered transporters.
- Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. TRANSPORT INFORMATION

Not regulated for transport

BLG (MARPOL Annex II)

- Description of the goods : DIPROPYLENE GLYCOL
Pollution category : Z
Ship type : 3

15. REGULATORY INFORMATION

TSCA 12b

No substances are subject to TSCA 12(b) export notification requirements.

Significant New Use Rules (SNUR)

No substances are subject to a Significant New Use Rule.

SARA 302/304

This product contains no known chemicals regulated under SARA 302/304.

SARA 311/312



Silver Fern Chemical SAFETY DATA SHEET

Glycol Ether DPNB

Version 1.4

Revision Date 08/11/2022

Print Date 08/24/2022

Based upon available information, this material is classified as the following health and/or physical hazards according to Section 311 & 312:

Specific target organ toxicity (single or repeated exposure)

SARA 313

This product contains no known chemicals regulated under SARA 313.

State Reporting

This material may contain trace levels of the following chemical substance(s) regulated under California Proposition 65. However, LyondellBasell has not tested for the presence of listed chemical substances. It is the responsibility of the California business owner to develop his or her own regulatory compliance plan. Contact Product Safety for further information at product.safety@lyb.com.

Substance	CASRN	Type of Toxicity			
		Carcinogen	Developmental	Repro-Male	Repro-Female
Benzene	71-43-2	X	X	X	

This product contains no known chemicals regulated by New Jersey's Worker and Community Right to Know Act.

This product contains the following chemicals regulated by Massachusetts' Right to Know Law:

71-43-2 Benzene

This product contains no known chemicals regulated by Pennsylvania's Right to Know Act.

Other international regulations

Global Inventory Status

The ingredients of this product are compliant with the following chemical inventory requirements or exemptions.

*Additional Explanatory Status Statements follow the table, as necessary.

Country/Region	Inventory	Status Description
Australia	AICS	Compliant
Canada	DSL	Compliant
China	IECSC	Compliant
Europe	REACH	See REACH Compliance Statement
Japan	ENCS	Compliant
Korea	KECI	Compliant
New Zealand	NZIoC	Compliant
Philippines	PICCS	Compliant
United States of America	TSCA	Compliant
Taiwan	TCSCA	Compliant

Glycol Ether DPNB

Version 1.4

Revision Date 08/11/2022

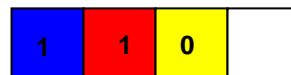
Print Date 08/24/2022

16. OTHER INFORMATION

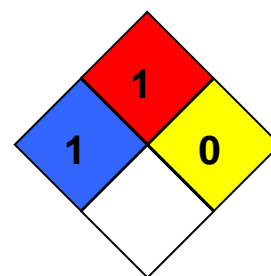
Material safety datasheet sections which have been updated:

Revised Section(s): 15

HMIS Classification : Health Hazard: 1
Flammability: 1
Physical hazards: 0



NFPA Classification : Health Hazard: 1
Fire Hazard: 1
Instability: 0



Further information

HMIS rating scale (0 = minimal hazard; 4 = severe hazard)

NFPA rating scale (0 = minimal hazard; 4 = severe hazard)

Disclaimer

Information in this document is accurate to the best of our knowledge at the date of publication. The document is designed to provide users general information for safe handling, use, processing, storage, transportation, disposal and release and does not constitute any warranty or quality specification, either express or implied, including any warranty of merchantability or fitness for any particular purpose. Users shall determine whether the product is suitable for their use and can be used safely and legally.

Approved - BR 2-27-24