SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name	Diethylene glycol mono-n-butyl ether
CAS number	112-34-5
Synonyms	Butyl diglycol, Diethylene glycol monobutyl ether, Butyl carbitol, 2-(2-Butoxyethoxy)ethanol, Dioxitol

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses	Laboratory chemicals.

1.3 Details of the supplier of the safety data sheet

Company	Lab Alley, LLC 12501 Pauls Valley Road Austin, Texas 78737 U.S.A.
Telephone	512-668-9918
Fax	512-886-4008

1.4 Emergency telephone

Emergency Phone #	US & Canada: 1-800-535-5053	INFOTRAC
	International 1-352-323-3500	INFOTRAC

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Serious Eye Damage/Eye Irritation	Category 2
Specific Target Organ Toxicity (repeated exposure)	Category 2
Target Organs - Kidney, Liver	

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal Word: Warning

Hazard statements: Causes serious eye irritation.
May cause damage to organs through prolonged or repeated exposure.

Precautionary statements: Prevention: Wash face, hands, and any exposed skin thoroughly after handling. Wear eye/face protection. Do not breathe dust/fume/gas/mist/vapors/spray.

Response: Get medical attention/advice if you feel unwell.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

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

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

None identified.

SECTION 3: Composition/information on ingredients

3.1 Components

Chemical name	Common name and synonyms	CAS number	Concentration
Diethylene glycol mono-n-butyl ether	Butyl diglycol, Diethylene glycol monobutyl ether, Butyl carbitol, 2-(2-Butoxyethoxy)ethanol, Dioxitol	112-34-5	>95%

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

If inhaled: Remove to fresh air. Get medical attention if symptoms occur. If not breathing, give artificial respiration.

In case of skin contact: Wash off immediately with plenty of water for at least 15 minutes. Get medical attention if symptoms occur.

In case of eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

If swallowed Do NOT induce vomiting. Get medical attention.

4.2 Most important symptoms and effects, both acute and delayed
No information available.

4.3 Indication of any immediate medical attention and special treatment needed
Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media Water spray, Carbon dioxide (CO2), dry chemical, alcohol-resistant foam.

Unsuitable extinguishing media No information available.

5.2 Specific hazards arising from the substance or mixture
Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition.
Hazardous Combustion Products: Carbon monoxide (CO). Carbon dioxide (CO2).

5.3 Special protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

5.4 Further information

Flash Point 77.7 °C / 171.86 °F

Autoignition Temperature 227.7 °C / 441.86 °F

Explosion limits

Upper 5.30 vol %
Lower 0.70 vol %

Sensitivity to Mechanical Impact No information available.
Sensitivity to Static Discharge No information available.

NFPA

Health	Flammability	Instability	Physical hazards
2	1	0	N/A

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment as required. Remove all sources of ignition. Avoid contact with skin, eyes, or clothing.

6.2 Environmental precautions
Avoid release to the environment. See Section 12 for additional Ecological Information.

6.3 Methods and materials for containment and cleaning up
Remove all sources of ignition. Soak up with inert absorbent material. Keep insuitable, closed containers for disposal.

6.4 Reference to other sections
See Section 2 for full list of hazard and precaution statements.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Precautions on safe handling
Wear personal protective equipment/face protection. Ensure adequate ventilation. Avoid contact with skin, eyes, or clothing. Avoid ingestion and inhalation. Keep away from open flames, hot surfaces, and sources of ignition.

Hygiene measures
Handle in accordance with good industrial hygiene and safety practice.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions
Keep containers tightly closed in a dry, cool, and well-ventilated place. Keep away from heat, sparks, and flame.

Incompatibilities
Strong oxidizing agents. Metals. Strong acids. Strong bases. Peroxides.

SECTION 8: Exposure controls/personal protection

8.1 Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)
No information available.

US. ACGIH Threshold Limit Values
No information available.

US. ACGIH Threshold Limit Values

Component	Type	Value
Diethylene glycol monobutyl ether	TWA	10 ppm

Biological occupational exposure limits
No information available.

8.2 Exposure controls

Appropriate engineering controls
Ensure that eyewash stations and safety showers are close to the workstation location.
Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Eye/face protection
Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin protection
Wear appropriate protective gloves and clothing to prevent skin exposure.

Body Protection
Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory protection
Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.
Recommended Filter type: Organic gases and vapours filter. Type A. Brown.

Control of environmental exposure
No information available.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical State	Liquid
Appearance	Colorless
Odor	Faint, mild, characteristic odor
Odor Threshold	No information available
pH	No information available
Melting Point/Range	-68°C
Boiling Point/Range	231°C @ 760 mmHg
Evaporation Rate	<0.01
Flammability (solid)	Not applicable
Flammability or explosive limit	
Upper	5.30 vol %

Lower	0.70 vol %
Vapor Pressure	0.01 mm Hg @ 20°C
Vapor Density	5.6
Density	0.9536 @ 20°C
Solubility	Soluble
Partition coefficient; n-octanol/water	No data available
Autoignition Temp	227.7°C / 441.86°F
Decomposition Temp	No information available
Viscosity	0.0649 cps @ 20°C
Molecular Formula	C8H18O3
Molecular Weight	162.23 g/mol
VOC Content(%)	No information available
Oxidizing properties	No information available

9.2 Other safety information
No information available.

SECTION 10: Stability and reactivity

10.1 Reactivity
No information available.

10.2 Chemical stability
Stable under normal conditions.

10.3 Possibility of hazardous reactions
May form explosive peroxides.

10.4 Conditions to avoid
Incompatible products. Excess heat. Keep away from open flames, hot surfaces, and sources of ignition.

10.5 Incompatible materials
Strong oxidizing agents, Metals, Strong acids, Strong bases, Peroxides.

10.6 Hazardous decomposition products
Carbon monoxide (CO), Carbon dioxide (CO2).

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Product Information, Component Information

Acute toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation

Diethylene glycol monobutyl ether	5660 mg/kg (Rat)	2700 mg/kg (Rabbit)	-

Skin corrosion/irritation
No information available.

Serious eye damage/eye irritation
Irritating to eyes.

Respiratory or skin sensitization
No information available.

Germ cell mutagenicity
No information available.

Carcinogenicity

Component	CAS	IARC	NTP	ACGIH	OSHA	Mexico
Diethylene glycol monobutyl ether	112-34-5	Not listed	Not listed	Not listed	Not listed	Not listed

Specific target organ toxicity - single exposure
None known.

Specific target organ toxicity - repeated exposure
Kidney, Liver.

Reproductive toxicity
No information available.

Chronic effects
No information available.

11.2 Additional Information
The toxicological properties have not been fully investigated.

SECTION 12: Ecological information

12.1 Toxicity

Product		Species	Test Results
Diethylene glycol monobutyl ether	EC50	Desmodesmus subspicatus	> 100 mg/L, 96h
	LC50	Lepomis macrochirus	1300 mg/L, 96h static
	EC50	Daphnia magna	> 100 mg/L, 48h

12.2 Persistence and degradability
Soluble in water. Persistence is unlikely based on information available.

12.3 Bio accumulative potential
No information available.

12.4 Mobility in soil
Will likely be mobile in the environment due to its water solubility (log Pow = -0.56).

12.5 Results of PBT and vPvB assessment
No information available.

12.6 Endocrine disrupting properties
No information available.

12.7 Other adverse effects
No information available.

SECTION 13: Disposal considerations

13.1 Waste Disposal Methods
Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

SECTION 14: Transport information

DOT (US) Not regulated.

IMDG Not regulated.

IATA Not regulated.

SECTION 15: Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
Not applicable.

CERCLA Hazardous Substance List (40 CFR 302.4)
Not listed.

SARA 304 Emergency release notification
Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)
Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous

See Section 2 for more information.

SARA 313 (TRI reporting)

Listed, Diethylene glycol monobutyl ether (CAS #112-34-5).

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Listed, Diethylene glycol monobutyl ether (CAS #112-34-5).

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act

Not regulated.

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

Not listed.

US state regulations

US. Massachusetts RTK - Substance List

Not listed.

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

Listed, Diethylene glycol monobutyl ether (CAS #112-34-5).

US. Pennsylvania Worker and Community Right-to-Know Law

Listed, Diethylene glycol monobutyl ether (CAS #112-34-5).

California Proposition 65

Not listed.

SECTION 16: Other information

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SECTION 17: Disclaimer

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.