



WYO-BEN, INC.

SAFETY DATA SHEET

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Trade Name: **DRIL-SOL™**
Chemical Family: Surfactant
Application: Foaming agent for drilling

Manufacturer/Supplier: Wyo-Ben, Inc.
1345 Discovery Drive
Billings, MT 59102 USA
Telephone: 800.548.7055
Facsimile: 406.656.0748

Emergency Phone Number: CHEMTREC® 800.424.9300

SECTION 2 — HAZARD IDENTIFICATION

OSHA/HCS status: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Classification: Acute toxicity – Oral Category 4
Acute toxicity – Dermal Category 5
Chronic aquatic toxicity Category 2

Hazard Symbols: Exclamation Mark; Environment

Signal Words: Warning

Hazard Statements: Harmful if swallowed
May be harmful in contact with skin
Toxic to aquatic life with long lasting effects

Precautionary Statements

Prevention: Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection. Avoid release to the environment.

Response: Specific Treatment (See Section 4 on the SDS).
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.
IF ON SKIN (or hair): Remove/Take off all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. If irritation persists, call a physician.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Storage: IF SWALLOWED: Call a doctor/physician if you feel unwell. Rinse mouth.
 Keep away from heat, sparks and open flame. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of reach of children.

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

Hazards not otherwise Classified: None known

SECTION 3 — COMPOSITION/INFORMATION ON INGREDIENTS

Substances	CAS Number	Percent
2-butoxyethaol	11-76-2	*
Diethylene Glycol	11-46-6	*

* The exact percentage (concentration) of the composition has been withheld as a trade secret.

SECTION 4 — FIRST AID MEASURES

Description of Necessary First Aid Measures

Inhalation: If mists/vapors are formed or irritation occurs, leave area and do not return until mists/vapors have dissipated. If irritation persists, see a physician. If breathing is difficult, give oxygen. If breathing has stopped, give artificial respiration and get medical attention immediately.

Skin: Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash contaminated clothing before reuse. If skin irritation persists, see a physician.

Eyes: Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Call a physician if irritation develops and persists.

Ingestion: Rinse mouth. Give water to drink but only if person is fully conscious. Call a physician if person feels unwell.

Most Important Symptoms, Effects, Acute and Delayed

Potential Acute Health Effects

Symptoms May cause irritation and/or burning to eyes and skin. May cause headache, dizziness, blurred vision, nausea and vomiting. May cause respiratory irritation.

Indication of Immediate Medical Attention and Special Treatment Needed, if necessary

Notes to Physician: Treat symptomatically.

SECTION 5 — FIRE FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media: None

Specific hazards arising from the chemical: No Information available.

Explosion data: Sensitivity to Mechanical Impact - None.
Sensitivity to Static Discharge - None

Hazardous thermal decomposition products: Oxides of carbon and nitrogen

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.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions: Ensure adequate ventilation, especially in confined areas

Environmental precautions

Environmental precautions: See Section 12 for additional information.

Methods and materials for containment and cleaning up

Small spill: Use a non-combustible material like vermiculite or sand to soak up the product and place into a container for later disposal.

Large spill: Dike the spill area and recover as much as possible in drums or salvage tanks. Use a non-combustible material like vermiculite or sand to soak up the remaining product and place into a container for later disposal.

SECTION 7 — HANDLING AND STORAGE

Precaution for safe handling

Advice on safe handling: Use personal protective equipment as required. Avoid contact with skin, eyes or clothing.
Wash thoroughly after handling

Conditions for safe storage including any incompatibilities

Storage conditions: Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Do not allow to freeze.

Incompatible materials: None known based on information supplied.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Exposure Guidelines

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Chemical Name	ACGIH	OSHA PEL	NIOSH IDLH
2-butoxyethanol 111-76-2	TWA: 20 ppm	TWA: 50 ppm TWA: 240 mg/m ³ (vacated) TWA: 25 ppm (vacated) TWA: 120 mg/m ³ (vacated) S* S*	IDLH: 700 ppm TWA: 5 ppm TWA: 24 mg/m ³
Formaldehyde 50-00-0	Ceiling: 0.3 ppm	TWA: 0.75 (vacated) TWA: 3 ppm unless specified in 1910.1048 (vacated) STEL: 10 ppm 30 min unless specified in 1910.1048 (vacated) Ceiling: 5 ppm unless specified in 1910.1048	IDLH: 20 ppm Ceiling: 0.1 ppm 15 min TWA: 0.016 ppm

NIOSH IDLH Immediately Dangerous to Life or Health

Other Information Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Appropriate engineering controls

Engineering controls: Showers, Eyewash stations & Ventilation systems.

Individual protection measures

Hygiene measures: Handle in accordance with good industrial hygiene and safety practice. Wash face, hands and any exposed skin thoroughly after handling. Keep away from food, drink and animal feeding stuffs. Wear suitable gloves and eye/face protection.

Eye/face protection: Tight sealing safety goggles.

Skin protection and Body Protection: Wear chemical resistant protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Respiratory protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators or air purifying respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid
Color:	Colorless to light yellow
Odor:	Lemon
Odor Threshold:	No information available
pH:	7.5 to 8.5
Melting Point:	No information available
Boiling Point:	100°C (212°F)
Flash Point:	Not determined. Based upon chemical composition product should not flash.
Evaporation Rate:	Not determined
Flammability (solid, gas):	No information available
Lower and upper explosive flammable limits:	No information available
Vapor Pressure:	No information available
Vapor Density:	No information available

Specific Gravity:	Approximately 1.0
Density:	Approximately 8.35 lbs/gal (based on calculation from specific gravity)
Solubility:	Soluble
Partition Coefficient: n-octanol/water:	No information available
Auto-ignition Temperature:	No information available. Based on chemical composition product should not auto-ignite.
Decomposition Temperature:	No information available
Viscosity:	No information available

SECTION 10 — STABILITY AND REACTIVITY

Reactivity:	No data available.
Chemical stability:	The product is stable under recommended storage conditions.
Possibility of hazardous reactions:	None under conditions of normal storage and use.
Conditions to avoid:	No special precautions beyond standard safe industrial practices.
Incompatible materials:	None known based on information supplied.
Hazardous decomposition products:	Oxides of carbon and nitrogen.

SECTION 11 — TOXICOLOGICAL INFORMATION

Information on toxicological effects

Product Information:	No data available
Inhalation:	No data available.
Eye contact:	Severely irritating to eyes.
Skin Contact:	May be harmful in contact with skin.
Ingestion:	Harmful if swallowed.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
2-butoxyethanol 111-76-2	470 mg/kg (Rat)	99 mg/kg (Rabbit)	450 ppm (Rat) 4 h

Information on toxicological effects

Symptoms	No Information available.
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Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization	No Information available.
Germ cell mutagenicity	No Information available.
Carcinogenicity	The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
2-butoxyethanol 111-76-2	A3	Group 3	-	-

ACGIH (American Conference of Governmental Industrial Hygienists)
A3 - Animal Carcinogen

*IARC (International Agency for Research on Cancer)
Not classifiable as a human carcinogen*

Reproductive toxicity: No Information available.
 STOT - single exposure: No Information available.
 STOT - repeated exposure: No Information available.
 Chronic toxicity: May cause adverse effects on the bone marrow and blood-forming system. May cause adverse liver effects.
 Target organ effects: Blood, Central nervous system, EYES, hematopoietic system, Kidney, Liver, Respiratory system, Skin.
 Aspiration hazard: No Information available.

Numerical measures of toxicity - Product Information

Unknown Acute Toxicity: 0% of the mixture consists of ingredient(s) of unknown toxicity.

The following values are calculated based on chapter 3.1 of the GHS document.

SECTION 12 — ECOLOGICAL INFORMATION

Ecotoxicity

0% of the mixture consists of component(s) of unknown hazards to the aquatic environment

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Sodium Alpha Olefin Sulfonate 68439-57-6	-	1.0 - 10.0 mg/L: 96 h Brachydanio rerio LC50 static 12.2 mg/L: 96 h Brachydanio rerio LC50 semi-static	-
2-butoxyethanol 111-76-2	-	1490 mg/L: 96 h Lepomis macrochirus LC50 static 2950 mg/L: 96 h Lepomis macrochirus LC50	1000 mg/L: 48 h Daphnia magna EC50 1698 - 1940 mg/L: 24 h Daphnia magna EC50
Diethylene Glycol 111-46-6	-	75200 mg/L: 96 h Pimephales promelas LC50 flow-through	8400 mg/L 0: 48 h Daphnia magna EC50
Sodium Chloride 7647-14-5	-	5560 - 6080 mg/L: 96 h Lepomis macrochirus LC50 flow-through 12946 mg/L: 96 h Lepomis macrochirus LC50 static 6020 - 7070 mg/L: 96 h Pimephales promelas LC50 static 7050: mg/L 96 h Pimephales promelas LC50 semi-static 6420 - 6700 mg/L: 96 h Pimephales promelas LC50 static 4747 - 7824 mg/L: 96 h Oncorhynchus mykiss LC50 flow-through	1000 mg/L: 48 h Daphnia magna EC50 340.7 - 469.2 mg/L: 48 h Daphnia magna EC50 Static
Formaldehyde 50-00-0	-	22.6 - 25.7 mg/L: 96 h Pimephales promelas LC50 flow-through 23.2 - 29.7 mg/L: 96 h Pimephales promelas LC50 static 1510 µg/L: 96 h Lepomis macrochirus LC50 static 41: 96 mg/L h Brachydanio rerio LC50 static 0.032 - 0.226 mL/L: 96 bh Oncorhynchus mykiss LC50 flow-through 100 - 136 mg/L: 96 h Oncorhynchus mykiss LC50 static	2 mg/L: 48 h Daphnia magna LC50 11.3 - 18 mg/L: 48 h Daphnia magna EC50 Static

Persistence and degradability

No Information available.

Bioaccumulation

No Information available.

Chemical Name	Partition coefficient
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2-butoxyethanol 111-76-2	0.81
Diethylene Glycol 111-46-6	-1.98

Other adverse effects: No Information available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes: Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging: Do not reuse container.

US EPA Waste Number U122

Chemical Name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Formaldehyde 50-00-0	U122	Included in waste streams: K009, K010, K038, K040, K156, K157		U122

This product contains one or more substances that are listed with the State of California as a hazardous waste.

SECTION 14 — TRANSPORT INFORMATION

The shipping classification information in this section (Section 14) is meant as a guide to the overall classification of the product. However, transportation classifications may be subject to change with changes in package size. Consult shipper requirements under 49 CFR, IATA and IMDG to assure regulatory compliance.

DOT Not regulated

SECTION 15 — REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Does not comply
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

US Federal Regulations

SARA 313: This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories:

Acute health hazard	No
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act): This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations

California Proposition 65: This product contains chemicals known to the state of California to cause cancer, or birth defects or other reproductive harm.

Chemical Name	California Proposition 65
Formaldehyde - 50-00-0	Carcinogen

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
2-butoxyethanol 111-76-2	X	X	X
Diethylene Glycol 111-46-6	-	-	X
Sodium Sulfate 7757-82-6	-	X	X
Formaldehyde 50-00-0	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number: Not Applicable

SECTION 16 — OTHER INFORMATION

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DISCLAIMER

All information presented herein is believed to be accurate, however, it is the user's responsibility to determine in advance of need that the information is current and suitable for their circumstances. No warranty or guarantee, expressed or implied is made by WYO-BEN, INC. as to this information, or as to the safety, toxicity or effect of the use of this product.