



HI-VALLEY CHEMICAL

LABORATORY PRODUCTS

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SAFETY DATA SHEET

Hi Valley Chemical

2-Butoxyethanol

1 PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: 2-Butoxyethanol
Synonyms: Butyl glycol; Butyl Cellosolve®
SDS Number: R-073
Revision Date: 3/28/2016
Version: 1
CAS Number: 111-76-2
Chemical Formula: C6H14O2
Supplier Details: High Valley Products, Inc.
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Centerville, Utah 84014
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2 HAZARDS IDENTIFICATION

Classification of the Substance or Mixture

GHS Classification in Accordance with 29 CFR 1910 (OSHA HCS):

Physical, Flammable Liquids, 4
Health, Acute toxicity, 4 Oral
Health, Acute toxicity, 4 Dermal
Health, Skin corrosion/irritation, 2
Health, Serious Eye Damage/Eye Irritation, 2 A
Health, Acute toxicity, 4 Inhalation

GHS Label Elements, Including Precautionary Statements

GHS Signal Word: **WARNING**

GHS Hazard Pictograms:



GHS Hazard Statements:

H227 - Combustible liquid
H302 - Harmful if swallowed
H312 - Harmful in contact with skin
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H332 - Harmful if inhaled

GHS Precautionary Statements:

P210 - Keep away from heat/sparks/open flames/hot surfaces. No smoking
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.
P264 - Wash skin thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P271 - Use only outdoors or in a well-ventilated area.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.

P301+312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

P302+352 - IF ON SKIN: Wash with soap and water.

P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305+351+338 - IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do.

Continue rinsing.

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

P322 - Specific measures (see _ on this label).

P330 - Rinse mouth.

P332+313 - If skin irritation occurs: Get medical advice/attention.

P337+313 - Get medical advice/attention.

P362 - Take off contaminated clothing and wash before reuse.

P370+378 - In case of fire: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide for extinction.

P403+235 - Store in a well ventilated place. Keep cool.

P501 - Dispose of contents/container to local regulations.

3 COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients:

Cas#	%	Chemical Name
111-76-2	100%	2-Butoxyethanol

4 FIRST AID MEASURES

Inhalation: If inhaled, move person to fresh air. If not breathing, give artificial respiration. Consult a physician.

Skin Contact: Wash with soap and water.

Eye Contact: Immediately flush eyes with large amounts of water for at least 15 minutes, lifting eyelids occasionally to facilitate irrigation.

Ingestion: DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. Get medical attention immediately.

5 FIRE FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special hazards arising from the substance or mixture

Carbon oxides

Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

Further information

No data

6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Use personal protective equipment. Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

Environmental precautions:

Do not let product enter drains.

Methods and materials for containment and cleaning up:

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

7 HANDLING AND STORAGE

Handling Precautions: Avoid contact with eyes, skin, or clothing.
 Avoid breathing vapors or mist.
 Keep away from sources of ignition - No smoking.
 Take measures to prevent electrostatic charge.

Storage Requirements: Keep container tightly closed.
 Store in cool/dry area.
 Keep away from heat, sparks, and flames.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal Protective Equipment: Eye/face protection
 Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection
 Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact
 Material: Nitrile rubber
 Minimum layer thickness: 0.4 mm
 Break through time: 480 min
 Material tested:Camatril® (KCL 730 / Aldrich Z677442, Size M)

Splash contact
 Material: Nitrile rubber
 Minimum layer thickness: 0.2 mm
 Break through time: 30 min
 Material tested:Dermatril® P (KCL 743 / Aldrich Z677388, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection
 Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection
 Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls.

If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Exposure Guidelines

Component	CAS-No.	Value	Control parameters	Basis
2-Butoxyethanol	111-76-2	TWA	20.000000 ppm	USA. ACGIH Threshold Limit Values (TLV)

Remarks: Upper Respiratory Tract irritation
 Eye irritation
 Substances for which there is a Biological Exposure Index or Indices (see BEI® section)
 Confirmed animal carcinogen with unknown relevance to humans

TWA 5.000000 ppm
24.000000 mg/m3 USA. NIOSH Recommended Exposure Limits

Potential for dermal absorption

TWA 50.000000 ppm
240.000000 mg/m3 USA. Occupational Exposure Limits (OSHA) - Table

Z-1 Limits for Air Contaminants

Skin designation The value in mg/m3 is approximate.

Biological occupational exposure limits

Component	CAS-No.	Parameters	Value	Biological specimen	Basis 2-ACGIH -
Butoxyethanol	111-76-2	Butoxyacetic acid (BAA)	200.0000mg/g	Urine	
Biological Exposure Indices (BEI)					

Remarks End of shift (As soon as possible after exposure ceases)

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Colorless.
Physical State:	Liquid
Odor:	No data available
Odor Threshold:	No data available
Solubility:	soluble
Spec Grav./Density:	0.902
Viscosity:	3.642 mm ² /s at 20 °C (68 °F) -
Boiling Point:	169 - 172.5 °C (336 - 342.5 °F) - lit.
Freezing/Melting Pt.:	-75 °C (-103 °F) - lit.
Flash Point:	67 °C (153 °F) - closed cup
Partition Coefficient:	log Pow: 0.81 at 25 °C (77 °F)
Vapor Pressure:	13 hPa (10 mmHg) at 81 °C (178 °F)
Vapor Density:	4.08 - (Air = 1.0)
pH:	No data available
Evap. Rate:	No data available
Auto-Ignition Temp:	230 °C (446 °F) at 1,013 hPa (760 mmHg)
Decomp Temp:	No data available
UFL/LFL:	Upper explosion limit: 12.7 %(V) / Lower explosion limit: 1.1 %(V)

10 STABILITY AND REACTIVITY

Reactivity:	No data available
Chemical Stability:	Stable under recommended storage conditions.
Conditions to Avoid:	Heat, flames and sparks.
Materials to Avoid:	Strong Oxidizing Agents.

11 TOXICOLOGICAL INFORMATION

Butyl cellulosolve (111-76-2) []

Information on toxicological effects

Acute toxicity:

LD50 Oral - rat - 470 mg/kg

LC50 Inhalation - rat - 4 h - 450 ppm Remarks: Behavioral:Ataxia. Nutritional and Gross Metabolic:Weight loss or decreased weight gain.

LD50 Dermal - rabbit - 220 mg/kg

LD50 Intraperitoneal - rat - 220 mg/kg

LD50 Intravenous - rat - 307 mg/kg

Skin corrosion/irritation: Skin - rabbit Result: Open irritation test

Serious eye damage/eye irritation: Eyes - rabbit Result: Moderate eye irritation - 24 h

Respiratory or skin sensitisation: no data available

Germ cell mutagenicity: no data available

Carcinogenicity:

IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (2-Butoxyethanol)

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.

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.

Reproductive toxicity: no data available

Overexposure may cause reproductive disorder(s) based on tests with laboratory animals.

Specific target organ toxicity - single exposure: no data available

Specific target organ toxicity - repeated exposure: no data available

Aspiration hazard: no data available

Additional Information:

RTECS: KJ8575000

Human exposure above 200 ppm can be expected to cause narcosis, damage to the kidney and liver and present an abnormal blood picture showing erythropenia, reticulocytosis, granulocytosis, leukocytosis, and would be likely to cause fragility of erythrocytes and hematuria. Swallowing of 2-butoxyethanol results in a sour taste that turns to a burning sensation and is followed by numbness of the tongue which indicates paralysis of the sensory nerve endings., Central nervous system depression, Headache, narcosis

Stomach - Irregularities - Based on Human Evidence

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ECOLOGICAL INFORMATION

Butyl cellusolve (111-76-2) []

Information on ecological effects

Toxicity:

Toxicity to fish LC50 - other fish - 220 mg/l - 96 h.

Toxicity to daphnia and EC50 - Daphnia magna (Water flea) - 1,815 mg/l - 24 h.
other aquatic invertebrates

Persistence and degradability: no data available

Ratio BOD/ThBOD 88 %

Bioaccumulative potential: no data available

Mobility in soil: no data available

Results of PBT and vPvB assessment PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

Other adverse effects: no data available

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DISPOSAL CONSIDERATIONS

Dispose of in accordance with local regulations.

14 TRANSPORT INFORMATION

NON D.O.T. REGULATED PER 49 CFR 173.150(F)

15 REGULATORY INFORMATION

Component (CAS#) [%] - CODES

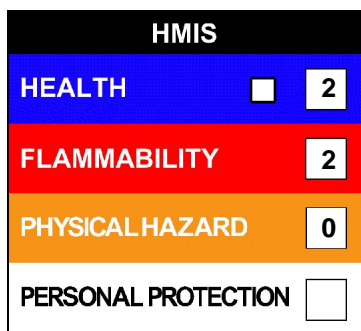
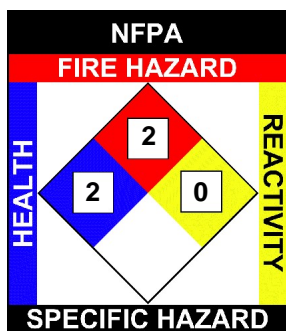
2-Butoxyethanol (111-76-2) [n/a%] HAP, MASS, OSHAWAC, PA, TSCA, TXAIR

Regulatory CODE Descriptions

HAP = Hazardous Air Pollutants
MASS = MA Massachusetts Hazardous Substances List
OSHA = OSHA workplace Air Contaminants
PA = PA Right-To-Know List of Hazardous Substances
TSCA = Toxic Substances Control Act
TXAIR = TX Air Contaminants with Health Effects Screening Level

16 OTHER INFORMATION

NFPA: Health = 2, Fire = 2, Reactivity = 0, Specific Hazard = n/a
HMIS III: Health = 2, Fire = 2, Physical Hazard = 0



Disclaimer:

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