



Material Safety Data Sheet

MUTUAL SOLVENT

HEALTH	2
FLAMMABILITY	2
PHYSICAL HAZARD	0
PERSONAL PROTECTION	

1. Product and Company Identification

Material name	MUTUAL SOLVENT
Patent Number	Not available
Revision date	February-04-2009
Version No.	2
CAS #	Mixture
Product use	Solvent
Manufacturer information	Clearwater International L.L.C. 100 Leetsdale Industrial Drive Leetsdale, PA 15056 US CHEMTREC 1-800-424-9300/703-527-3887
Emergency	CHEMTREC 1-800-424-9300/703-527-3887
Supplier information	Universal Well Services, Inc. 18360 Technology Drive Meadville, PA 16335 US
Supplier emergency telephone number(s)	CHEMTREC (800)424-9300/(703)527-3887

2. Hazards Identification

Emergency overview	Harmful by inhalation, in contact with skin and if swallowed. Prolonged exposure may cause chronic effects. Components of the product may be absorbed into the body by inhalation, ingestion and through the skin.
OSHA regulatory status	This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).
Potential health effects	
Routes of exposure	Inhalation. Ingestion. Skin contact. Eye contact.
Eyes	Toxic in contact with eyes. Do not get this material in contact with eyes.
Skin	Do not get this material in contact with skin.
Inhalation	Very toxic by inhalation. Prolonged inhalation may be harmful. Do not breathe dust/fume/gas/mist/vapors/spray.
Ingestion	Toxic if swallowed. May cause delayed lung damage. Do not ingest. Components of the product may be absorbed into the body by ingestion.
Target organs	Kidney. 2-Butoxy ethanol may be absorbed through the skin in toxic amounts if contact is repeated and prolonged and may cause blood damage. These effects have not been observed in humans. Blood. Central nervous system. Eyes. Liver. Lungs. Respiratory system. Skin.



Chronic effects	This product may be harmful if it is absorbed through the skin. Unconsciousness. Shortness of breath. Edema. Jaundice. Cyanosis. Liver injury may occur. Kidney injury may occur. May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. May cause delayed lung damage.
Signs and symptoms	Unconsciousness. Discomfort in the chest. Shortness of breath. Narcosis. Cyanosis. Decrease in motor functions. Behavioral changes. Cough. Edema. Liver enlargement. Jaundice. Proteinuria.
Potential environmental effects	May cause long-term adverse effects in the environment.

3. Composition / Information on Ingredients

Components	CAS #	Percent
EB-Butyl Cellosolve	111-76-2	> 60

4. First Aid Measures

First aid procedures	
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation develops or persists.
Skin contact	Wash off with soap and water. Get medical attention if irritation develops or persists.
Inhalation	If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Get medical attention immediately.
Ingestion	If swallowed, seek medical advice immediately and show this container or label. Do not induce vomiting without medical advice.
Notes to physician	In case of shortness of breath, give oxygen. Keep victim warm. Symptoms may be delayed.
General advice	In case of shortness of breath, give oxygen. Keep victim warm. Call a physician if symptoms develop or persist. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire Fighting Measures

Flammable properties	Combustible by OSHA criteria. Containers may explode when heated. Runoff to sewer may cause fire or explosion hazard.
Extinguishing media	
Suitable extinguishing media	Water. Alcohol foam. Dry chemical. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	Do not use a solid water stream as it may scatter and spread fire.
Protection of firefighters	
Specific hazards arising from the chemical	Fire may produce irritating, corrosive and/or toxic gases.



Protective equipment and precautions for firefighters

In the event of fire and/or explosion do not breathe fumes. Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask. If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also consider initial evacuation for 800 meters (1/2 mile) in all directions. ALWAYS stay away from tanks engulfed in flame. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Withdraw immediately in case of rising sound from venting safety devices or any discoloration of tanks due to fire. Move containers from fire area if you can do it without risk. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn. Use water spray to cool unopened containers. Cool containers with flooding quantities of water until well after fire is out.

6. Accidental Release Measures

Personal precautions

Fully encapsulating, vapor protective clothing should be worn for spills and leaks with no fire. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering. Keep unnecessary personnel away. Stay upwind. Keep out of low areas.

Methods for containment

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Prevent entry into waterways, sewers, basements or confined areas.

Methods for cleaning up

Should not be released into the environment.

Large Spills: Dike far ahead of liquid spill for later disposal. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. After removal flush contaminated area thoroughly with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean contaminated surface thoroughly.

Never return spills in original containers for re-use.

7. Handling and Storage

Handling

Do not handle or store near an open flame, heat or other sources of ignition. Use only with adequate ventilation. Wash thoroughly after handling. Avoid prolonged exposure.

Storage

Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a closed container away from incompatible materials.

8. Exposure Controls / Personal Protection

Exposure limits

ACGIH

Components

CAS #

TWA

STEL

Ceiling

EB-Butyl Cellosolve

111-76-2

20 ppm

Not established

Not established

OSHA

Components

CAS #

TWA

STEL

Ceiling

EB-Butyl Cellosolve

111-76-2

50 ppm

Not established

Not established



Engineering controls	Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.
Personal protective equipment	
Eye / face protection	Wear chemical goggles. Face-shield.
Skin protection	Wear chemical protective equipment that is specifically recommended by the manufacturer. It may provide little or no thermal protection. Protective gloves. Impervious gloves. Wear suitable protective clothing.
Respiratory protection	Wear positive pressure self-contained breathing apparatus (SCBA). When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
General hygiene considerations	Do not get this material in contact with eyes. Do not get this material in contact with skin. When using do not eat or drink. Keep away from food and drink. Handle in accordance with good industrial hygiene and safety practice. Wash hands after handling and before eating.

9. Physical & Chemical Properties

Appearance	Not available
Color	Not available
Odor	Not available
Odor threshold	Not available
Physical state	Liquid.
Form	Liquid.
pH	Not available
Melting point	-94 °F (-70 °C) estimated
Freezing point	Not available
Boiling point	338 °F (170 °C) estimated
Flash point	143.6 °F (62 °C) estimated
Evaporation rate	Not available
Flammability	Not available.
Flammability limits in air, upper, % by volume	Not available
Flammability limits in air, lower, % by volume	Not available
Vapor pressure	Not available
Vapor density	Not available
Specific gravity	0.9016 estimated
Relative density	0.9015 g/cm ³ estimated
Solubility (water)	Not available
Partition coefficient (n-octanol/water)	Not available
Auto-ignition temperature	446 °F (230 °C) estimated
Decomposition temperature	Not available
VOC	100 % estimated



10. Chemical Stability & Reactivity Information

Chemical stability	Stable at normal conditions.
Conditions to avoid	Heat, flames and sparks.
Incompatible materials	May form explosive mixtures with air. Strong oxidizing agents. Caustics.

11. Toxicological Information

Acute effects	Acute LD50: 1746 mg/kg estimated, Rat, Oral Acute LD50: 435 mg/kg estimated, Rat, Dermal Acute LC50: 700 mg/l/4h estimated, Rat, Inhalation
Component analysis - LD50	
Toxicology Data - Selected LD50s and LC50s	
EB-Butyl Cellosolve	111-76-2 Inhalation LC50 Rat: 2.21 mg/L/4H; Inhalation LC50 Rat:450 ppm/4H; Oral LD50 Rat:470 mg/kg; Dermal LD50 Rat:2270 mg/kg; Dermal LD50 Rabbit:220 mg/kg
Sensitization	Not expected to be hazardous by OSHA criteria.
Local effects	Liver toxicity. Blood disorder may occur after ingestion.
Chronic effects	Hazardous by OSHA criteria. This product may be harmful if it is absorbed through the skin. Repeated absorption may cause disorder of central nervous system, liver, kidneys and blood. Prolonged or repeated exposure may cause lung injury. Prolonged exposure may cause chronic effects. 2-Butoxy ethanol may be absorbed through the skin in toxic amounts if contact is repeated and prolonged. These effects have not been observed in humans.
Subchronic effects	Kidney injury may occur. Blood disorder may occur after ingestion. Blood disorder may occur after prolonged inhalation. Blood disorder may occur after prolonged skin contact.
Carcinogenicity	Not expected to be hazardous by OSHA criteria.
ACGIH - Threshold Limit Values - Carcinogens	
EB-Butyl Cellosolve	111-76-2 A3 - Confirmed animal carcinogen with unknown relevance to humans
Neurological effects	Hazardous by OSHA criteria.
Further information	Symptoms may be delayed.

12. Ecological Information

Ecotoxicity	LC50 1490 mg/L estimated, Fish, 96.00 Hours, Components of this product have been identified as having potential environmental concerns.
Ecotoxicity - Freshwater Fish Species Data	
EB-Butyl Cellosolve	111-76-2 96 Hr LC50 Lepomis macrochirus: 1490 mg/L [static]
Ecotoxicity - Water Flea Data	
EB-Butyl Cellosolve	111-76-2 24 Hr EC50 water flea: 1720 mg/L; 24 Hr LC50 Daphnia magna: 1698-1940 mg/L
Environmental effects	
Ecotoxicity - Freshwater Fish Species Data	
EB-Butyl Cellosolve	111-76-2 96 Hr LC50 Lepomis macrochirus: 1490 mg/L [static]
Ecotoxicity - Water Flea Data	
EB-Butyl Cellosolve	111-76-2 24 Hr EC50 water flea: 1720 mg/L; 24 Hr LC50 Daphnia magna: 1698-1940 mg/L



13. Disposal Considerations

Disposal instructions

Do not allow this material to drain into sewers/water supplies. This product, in its present state, when discarded or disposed of, is not a hazardous waste according to Federal regulations (40 CFR 261.4 (b)(4)). Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste. Dispose in accordance with all applicable regulations.

14. Transport Information

Department of Transportation (DOT) Requirements

Not regulated as hazardous goods.

Department of Transportation (DOT) Requirements

Bulk

Not regulated as hazardous goods.

Department of Transportation (DOT) Requirements

Not regulated as dangerous goods.

Canadian Transportation of Dangerous Goods (TDG) Requirements

Not regulated as hazardous goods.

Canadian Transportation of Dangerous Goods (TDG) Requirements

Not regulated as dangerous goods.

IMDG

Not regulated as hazardous goods.

IATA

Not regulated as hazardous goods.

15. Regulatory Information

Labelling

Contains

EB-Butyl Cellosolve

US federal regulations

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

All components are on the U.S. EPA TSCA Inventory List.

CERCLA/SARA Hazardous Substances - Not applicable.

U.S. - CERCLA/SARA - Section 313 - Emission Reporting

EB-Butyl Cellosolve	111-76-2	1.0 % de minimis concentration (applies to R-(OCH ₂ CH ₂) _n -OR', where n = 1,2, or 3, R=alkyl C7 or less, or R = phenyl or alkyl substituted phenyl, R' = H or alkyl C7 or less, or OR' consisting of carboxylic acid ester, sulfate, phosphate, nitrate, or sulfonate, Chemical Category N230)
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U.S. - FDA - Direct Food Additives

EB-Butyl Cellosolve	111-76-2	21 CFR 173.315
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Occupational Safety and Health Administration (OSHA)

29 CFR 1910.1200 hazardous chemical Yes

CERCLA (Superfund) reportable quantity

None



Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
 Immediate Hazard - Yes
 Delayed Hazard - No
 Fire Hazard - Yes
 Pressure Hazard - No
 Reactivity Hazard - No

Section 302 extremely hazardous substance No

Section 311 hazardous chemical Yes

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
Europe	European Inventory of New and Existing Chemicals (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

International regulations

Canada - WHMIS - Ingredient Disclosure List

EB-Butyl Cellosolve 111-76-2 1 %

State regulations

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

U.S. - Massachusetts - Right To Know List

EB-Butyl Cellosolve 111-76-2 Present

U.S. - Minnesota - Hazardous Substance List

EB-Butyl Cellosolve 111-76-2 Skin

U.S. - New Jersey - Right to Know Hazardous Substance List

EB-Butyl Cellosolve 111-76-2 sn 0275

U.S. - Pennsylvania - RTK (Right to Know) List

EB-Butyl Cellosolve 111-76-2 Present

U.S. - Rhode Island - Hazardous Substance List

EB-Butyl Cellosolve 111-76-2 Toxic (skin)

U.S. - Texas - Effects Screening Levels - Long Term

EB-Butyl Cellosolve 111-76-2 5 ppb ESL; 24 µg/m3 ESL

U.S. - Texas - Effects Screening Levels - Short Term

EB-Butyl Cellosolve 111-76-2 50 ppb ESL; 240 µg/m3 ESL

16. Other Information

HMIS® ratings

Health: 2
 Flammability: 2
 Physical hazard: 0

NFPA ratings

Health: 2
 Flammability: 2
 Instability: 0



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Disclaimer

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MSDS sections updated

Product and Company Identification: Product and Company Identification