



SAFETY DATA SHEET

BUTYL CELLOSOLVE

1. IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND OF THE SUPPLIER

Product name: BUTYL CELLOSOLVE

Recommended use: Chemical for industrial

Manufacturer/Supplier: **MODERN CHEMICAL CO.,LTD.**
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2. HAZARDS IDENTIFICATION

Label elements

Pictogram



Signal word

Danger

Hazard statement(s):

- 1.) Flammable liquid.
- 2.) Harmful if swallowed, in contact with skin or if inhaled.
- 3.) Causes skin irritation.
- 4.) Causes serious eye irritation.
- 5.) Toxic in contact with skin.
- 6.) Fatal if inhaled.

Precautionary statement(s):

- 1.) Keep container in a well-ventilated place.
- 2.) Avoid breathing mist/vapours/spray.



- 3.) Wear protective gloves/protective clothing/eye protection/face protection.
- 4.) IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.
- 5.) IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- 6.) Call a POISON CENTER/doctor if you feel unwell.
- 7.) IF ON SKIN: Wash with plenty of water.
- 8.) Dispose of contents/ container in accordance with local/regional/national/international regulations.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonym: 2-Butoxyethanol, Butyl glycol, EB Solvent, Butyl Glycol Ether, 2-n-Butoxyethanol, Butyl cellosolve, Ethylene glycol monobutyl ether, Ethylene glycol n-butyl ether, EGBE.

Ingredients	% (w/w)	CAS NO.
BUTYL CELLOSOLVE	100	111-76-2

4. FIRST AID MEASURES

- Inhalation:** If breathed in, move person into fresh air. If not breathing, give artificial respiration.
Consult a physician.
- Skin contact:** Remove contaminated clothing. Wash off with soap and plenty of water. If skin irritation continues, Consult a physician.
- Eye contact:** Rinse thoroughly with plenty of water for at least 20 minutes and consult a physician.
- Ingestion:** **Do NOT induce vomiting.** Rinse mouth with water. Consult a physician.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media:

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

Unsuitable Extinguishing Media

Water with a full water jet.

Specific hazards arising from Chemicals

Peroxidase, Carbon monoxide, Carbon dioxide, Poisonous gases/vapours, Inflammable gases/vapours.

Special protective equipment for fire-fighters.

Wear self-contained breathing apparatus and Wear full protective suit.



6. ACCIDENTAL RELEASE MEASURE

- Precautions:** Wear protective equipment. Keep unprotected persons away. Use breathing protection against the effects of fumes/dust/aerosol. Keep away from sources of ignition. Ensure adequate ventilation. Bring persons out of danger.
- Environmental precautions:** Do not allow to enter sewage systems, water bodies, groundwater or soil. Inform respective authorities of the product reach water, sewage system or soil.
- Methods and Material for Containment and Clean Up:** Ensure adequate ventilation. Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders). Clean up effected area. May be recycled or disposed of in appropriate containers. Dispose of contaminated material as waste.

7. HANDLING AND STORAGE

Precautions for Safe Handling & Product Transfer:

Avoid breathing vapor. Do not get in eyes, on skin, on clothing. Do not swallow. Keep container tightly closed. Use with adequate ventilation. Wash thoroughly after handling. Keep away from heat, sparks and flame.

Conditions for Safe Storage & Unsuitable Materials:

Store in original container if possible. Provide solvent resistant, sealed floor. Prevent any penetration into the ground.

Do not use light alloy containers. Store in a dry place. Store in a closed container.

Suitable material: Steel or stainless steel.

Unsuitable material: Aluminium.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits: TWA 25ppm

Appropriate Engineering Controls: While handling a small amount of chemicals, use the local ventilation apparatus. While handling a great quantity of chemicals isolate the workers and work space.

Individual Protection Measures

Respiratory protection: In case of brief exposure or low pollution use breathing filter apparatus. In case of intensive or longer exposure use breathing apparatus that is independent of circulating air.

Hand protection: Imperious gloves composed of Butyl rubber, Saranex, or Viton is better.

Eye protection: Wear chemical goggles.



Skin and body protections: Coveralls working clothes and working boots composed of Butyl rubber, Saranex, or Viton.

Hygiene measures: Take off the clothes of pollution as quickly after the work. Forbid smoking or diet in the workplace. After dealing with the material, must wash hands completely. Keep the working place clean.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form, Color and Odor : liquid, Colorless , Characteristic	Evaporation rate : 0.07 – 0.08 (n-Butyl Acetate = 1)
Melting Point : (-75) – (-70.25) °C	Specific gravity : .0.901-0.904 g/cm ³ at 20 °C
pH : N/A	Solubility in water : Soluble
Boiling point : 170.8 - 171 °C	Viscosity : 3.3 mPa.sec at 20 °C
Vapour pressure : 0.76 mmHg, 1 hPa at 20 °C	Vapour density (air=1) : 4.08 - 4.10
Lower explosive limits : 1.1 %Vol	Upper explosive limits : 10.6 - 12.7 %Vol
Auto-ignition temperature : 230 - 238°C	Flash point: >60 - 93 °C
Odour threshold: 0.1ppm	Flammability (solid, gas): N/A
Decomposition temperature: N/A	Solubility in other solvents: N/A
n-octanol/water partition coefficient (log P_{ow}): 0.80 – 0.81	

10. STABILITY AND REACTIVITY

Chemical Stability: Stable.

Reactions: No data available

Possibility of Hazardous Reactions: Forms explosive mixtures with air at elevated temperature.

React with strong oxidation agents, strong base, oxygen and React with light alloys to form hydrogen. Forms peroxides.

Conditions to avoid: Temperature higher than 62°C, sunlight, open flames, sparks, electrostatic charges, heat-sensitive. Air and light sensitive.

Materials to avoid: Strong oxidizing, Strong base, Rubber, plastic, paint and Light metals.

Hazardous decomposition products: Peroxidase, Carbon monoxide, Carbon dioxide, Poisonous gases/vapours, Inflammable gases/vapours.



11. TOXICOLOGICAL INFORMATION

Acute toxicity:	LD50 (Oral, rat): 470 - 1746 mg/kg LD50 (Skin, rat): >1000-2000 mg/kg LD50 (Skin, rabbit): 220 mg/kg LC50 (Inhalative, rat): 2 - 20 mg/l – 4h LC50 (Inhalation, rat): 486 ppm
Sensitization:	Slightly skin irritation. Cause serious eye irritation. Harmful by inhalation, in contact with skin and if swallowed. Danger by skin absorption. Inhalation of concentrated vapour as well as oral intake will lead to anaesthesia-like condition and headache, dizziness.
Chronic toxicity:	The chemical might irritate respiratory tract and eyes, damage blood cells and develop blood urine. In animal model, reproductive system damage developed. 25ppm/6h (pregnant 6-15 days, female rats, inhalation), which makes the embryo abnormal.
Further toxicological information:	No data available

12. ECOLOGICAL INFORMATION

Toxicity

Toxicity to fish:	LC50 - Onchorhynchus mykiss, 96h: 1474 mg/l LC50 - Fish, 96h: 1490 mg/l
Toxicity to daphnia and other aquatic invertebrates:	EC50 - Daphnia magna, 48 h: 1550 mg/l
Toxicity to algae:	EC50 - Algae (Pseudokirchner. Sub.), 72 h: 911 mg/l
Toxicity to bacteria:	EC50 - Bacteria (pseudomonas putida), 16h: 700 mg/l
Biodegradability Remarks:	Easily biodegradable. 95-100% - 28d
Bioaccumulative Potential:	No accumulation.
Mobility:	No data available.
Affected in any other way:	Do not allow product to reach ground water, water bodies, sewage system or soil.



13. DISPOSAL CONSIDERATIONS

Material Disposal:

Consult the relevant regulation to deal with. Take specific sanitary landfills or incinerators processing method. Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Container Disposal:

Disposal must be made according to official regulations.

14. TRANSPORT INFORMATION

ADR/ADNR

UN-NO: 2810 Class: 6.1 Packing group: III

Proper shipping name: organic toxic liquid, not confined with rules

IMGD

UN-NO: 2810 Class: 6.1 Packing group: III

Ems: F-E, S-D

Proper shipping name: organic toxic liquid, not confined with rules

IATA

UN-NO: 2810 Class: 6.1 Packing group: III

Proper shipping name: organic toxic liquid, not confined with rules

15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

TSCA (Toxic Substances Control Act): Substance is listed.

National regulations

Information on occupational restrictions:

Council Directive 94/33/EC of 22 June 1994 on the protection of young people at work

Council Directive 92/85/EEC Employment restrictions concerning concerning pregnant and lactating women must be observed.

Major Accident Hazard – Seveso Directive 96/82/EC: Not regulated

Other regulation, limitations and prohibitive regulations

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer not regulated

Regulation (EC) No 850/2004 on persistent organic pollutants and amending Directive 79/117/EEC not regulated



Substances of you very high concern (SVHC) according to REACH, Article 57

This product contains no SVHC above the legal limit of concentration $\geq 0.1\%$ (w/w)

REGULATION (EU) No 649/2012 concerning the export and import of dangerous chemicals (PIC procedure):

not regulated

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

Applicable Regulation:

1. Labor Safety and Health Law
2. Regulation of Labeling and Hazard Communication of Dangerous and Harmful Materials.
3. Organic solvent poisoning prevention rules.
4. Harmful substances concentration permission standards in the labor working environment.
5. Road Traffic Safety Rules.
6. Industrial waste storage and disposal facilities standard.

Public dangerous good and High-pressure flammable gas setting standard & Safety management approach.

16. Other Information

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