Global Chemie ASCC

Safety Data Sheet

Butyl Cellosolve

1. Identification of the substance or mixture and of the supplier

Trade Name	:	Butyl Cellosolve, Butyl Glycol Ether
Material Uses	:	Solvent for nitrocellulose. Solvent is used in coating and ink industry. A slow evaporating active solvent used in lacquer thinners.
Supplier	:	**Global Chemie ASCC Limited** 140/31 Moo12 T.Rachathewa A.Bangplee Samutprakarn 10540 **Telephone**: +66 2 763 7782 - 4 (Auto) **Fax**: + 66 2 763 7785 www.gctcl.com
Emergency Contact	:	0819285826

2. Hazards Identification

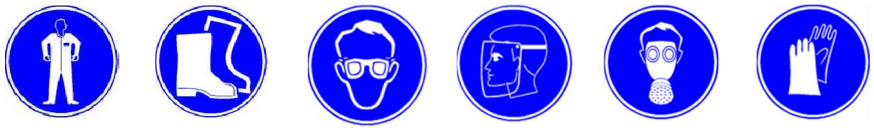
GHS Classification	:	Acute toxicity : Category 4 Eye Irritation : Category 2 Skin Irritation : Category 2
Signal word	:	Warning
Health Hazard	:	Irritating to skin, eyes and respiratory system. Harmful if swallowed.
Environmental Hazard	:	Annex 1 substance under review by the EU commission.
GHS Pictogram	:	

GHS Precautionary statements

Prevention	P261	Avoid breathe dust/fume/gas/mist/vapours/spray.
	P264	Wash 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 glove/eye protection/face protection.
Response	<u>If on skin</u>	
	P332+P313	If skin irritation occurs : Get medical advice/attention.
	P302+P352	Wash with plenty of soap and water.
	P362	Take off contaminated clothing and wash before reuse.
	<u>If in eye</u>	
	P305+P351 +P338	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P337+P313	If eye irritation persists: Get medical advice/attention.
	<u>If inhaled</u>	
	P304+P340	Remove victim to fresh air and keep at rest in a position comfortable for breathing.
	<u>If swallowed</u>	
	P301+P312	Call a poison center or doctor/physician if you feel unwell.
	P330	Rinse mouth.
Storage	P403+P233	Store in a well-ventilated place. Keep container tightly closed.
	P235	Keep cool.
	P405	Store locked up.
Disposal	P501	Disposal should be in accordance with applicable regional, national, and local laws and regulations. Local regulations may be more stringent than regional or national requirements and must be complied with.

Precautionary Pictograms



3. Composition/ Information on ingredients

Chemical Name	:	Ethylene Glycol Monobutyl Ether
Common Name	:	Butyl Glycol, Butyl Glycol Ether
Synonyms Name	:	Butyl Oxitol
CAS No.	:	111-76-2
UN No.	:	1993
Molecular Weight	:	118.17
Chemical Formula	:	$HOCH_2CH_2O(CH_2)_3CH_3$

4. First-aid measures

Inhalation	:	Remove to fresh air. If the victim has difficulty breathing or tightness of the chest, give 100% oxygen with rescue breathing or CPR as required and transport to the nearest medical facility.
Skin Contact	:	Remove contaminated clothing. Immediately flush skin with large amounts of water for at least 15 minutes, and follow by washing with soap and water if available.
Eye Contact	:	Immediately flush eyes with large amounts of water for at least 15 minutes while holding eyelids open. Transport to the nearest medical facility for additional treatment.
Ingestion	:	Do not induce vomiting, transport to nearest medical facility for additional treatment. If vomiting occurs spontaneously, keep head below hips to prevent aspiration.

5. Fire –fighting measures

Suitable extinguishing media	:	Water spray or fog, Dry chemical powder,Alcohol-resistant foam and Carbon dioxide.
Specific hazard arising from the chemical	:	May produce toxic fumes of carbon monoxide, carbon dioxide if burning.
Special protective action for fire-fighters	:	Keep adjacent containers cool by spraying with water.
Protective Equipment.	:	Wear full protective clothing and self-contained breathing apparatus.

6. Accidental Release Measures

Protective Measures :

- Observe all relevant local and international regulations.
- Avoid contact with spilled or released material. Immediately remove all contaminated clothing. For guidance on selection of personal protective equipment see chapter 8 this Material Safety Data Sheet. Shut off leaks, if possible without personal risks. Remove all possible sources of ignition in the surrounding area. Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate barriers.

- Take precautionary measures against static discharge. Ensure electrical continuity by bonding and grounding (earthing) all equipment.

Clean-Up Methods

◆ Small spillage (< 200 LT)	:	Transfer by mechanical means to a labeled, sealable container for product recovery or safe disposal. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely.
◆ large spillage (> 200 LT)	:	Transfer by mechanical means such as vacuum truck to a salvage tank for recovery or safe disposal. Do not flush away residues with water. Retain as contaminated waste. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely.

Other Information	:	Notify authorities if any exposure to the general public or the environment occurs or is likely to occur.

7. Handling And Storage

Handling	:	Avoid contact with skin, eyes, and clothing. Do not breathe vapours. Extinguish any naked flame. Remove ignition sources. Avoid sparks. Do not smoke. The vapour is heavier than air spreads along the ground and distant ignition is possible. Ensure electrical continuity by bonding and grounding (earthing) all equipment. Do not use compressed air for filling, discharging, or handling operations. Handle and open container with care in well-ventilated area. Do not empty into drains.
Storage	:	Must be stored in a diked (bunded) well-ventilated area, away from sunlight, ignition sources and other sources of heat. Bulk storage tanks should be diked (bunded). Keep away from aerosols, flammables, oxidizing agents, corrosives. Storage Temperature: Ambient.
Product Transfer	:	Keep containers closed when not in use. Do not use compressed air for filling, discharging, or handling operations. If positive displacement pumps are used, these must be fitted with a non-integral pressure relief valve. Ensure electrical continuity by bonding and grounding (earthing) all equipment.
Recommended Materials	:	For containers, or container linings use mild steel, stainless steel.
Additional Advice	:	Containers even those that have been emptied, can contain explosive vapours. Do not cut, drill, grind, weld or perform similar operations on or near containers.

8. Exposure Controls and Personal Protection

Exposure Standard	:	Occupational Exposure Limits • TLV-TWA = 20 ppm (121 mg/m^3) 8 Hours. • TLV-STEL = 50 ppm (240 mg/m^3)
Engineering Controls Workplace	:	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapours below their respective threshold limit value.
Respiratory Protection	:	Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.
Hand Protection	:	Butyl rubber gloves, Nature rubber gloves, Neoprene rubber gloves, Nitrile rubber gloves.
Eye Protection	:	Chemical splash goggles (chemical monogoggles).

Other Protection	:	Use protective clothing which is chemical resistant to this material. Safety shoes and boots should also be chemical resistant.

9. Physical and Chemical Properties

Appearance	:	Clear liquid.
Odour	:	Slightly ether odour.
pH Value	:	No data available.
Boiling Point (°C)	:	171 °C
Melting Point (°C)	:	-70 °C
Flash Point	:	62 °C
Lower/Upper Flammability limits	:	1.1 - 12.7 %V
Vapour Pressure (kPa)	:	0.1 kPa @ 20 °C
Specific Gravity	:	0.903 @ 20 °C (ASTM D4052)
Vapour Density	:	0.900 - 0.902 @ 20 °C (ASTM D4052)
Solubility in Water	:	at 20 °C or 68 °F Completely miscible. (ASTM D1722)
Evaporating Rate	:	0.08 (n-Butyl Acetate=1)
Auto Ignition Temperature	:	238 ° C

10. Stability and Reactivity

Chemical Reactivity	:	Stable under normal conditions.
Stability	:	Stable under normal conditions of use.
Hazardous Polymerisation	:	No.
Conditions to Avoid	:	Heat, flame, spark and other ignition sources.
Materials to Avoid	:	Strong oxidizing agents. Acid. Strong bases.
Hazardous Decomposition Products	:	Thermal decomposition is highly dependent on conditions. Carbon monoxide, carbon dioxide and other organic compounds will be evolved when this material undergoes combustion or thermal or oxidative degradation. May form explosive peroxides.

11. Toxicological Information

Acute Toxicity

◆ LD_{50} Acute oral toxicity	:	470 mg/kg , (rat)
◆ LD_{50} Acute dermal toxicity	:	220 mg/kg , (rabbit)
◆ LC_{50} Acute Inhalation Toxicity	:	450 ppm/ 4 hours , (rat)
Skin Irritation	:	Irritating to skin.
Eye Irritation	:	Irritating to eyes.
Respiratory Irritation	:	Inhalation of vapours or mists may cause irritation to the respiratory system.
Carcinogenicity	:	No data available.

12. Ecological Information

Acute Toxicity

◆ Fish	:	Low toxicity	: LC_{50} > 1,000 mg/l
◆ Bacteria	:	Low toxicity	: EC_{50} > 1,000 mg/l
Mobility	:	Dissolves in water. If product enters soil, it will highly mobile and may contaminate groundwater.	
Persistence / Degradability	:	Readily biodegradable.	
Bio-accumulation	:	Has the potential to bioaccumulate low.	

13. Disposal Considerations

Material Disposal	:	Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classifications and disposal methods in compliance with applicable regulations.
Container Disposal	:	Drain container thoroughly. After draining, vent in a safe place away from sparks and fire. Refer to Section 7 before handling the product or containers. Residues may cause an explosion hazard. Do not puncture, cut or weld unclenaed drums. Send to drum recoverer or metal reclaimer.
Local Legislation	:	Disposal should be in accordance with applicable regional, national, and local laws and regulations. Local regulations may be more stringent than regional or national requirements and must be complied with.

14. Transport Information

Road/Rail Transport

ADR/RID

- UN. Number : 1993
- Class/Item : 3/14
- Hazard Symbol : Flammable Liquid
- Proper Shipping Name : Ethylene Glycol Monobutyl Ether
- Packing Group : III

Maritime Transport IMO

- UN. Number : 1993
- Class : 3
- Packing Group : III
- Hazard Symbol : Flammable Liquid
- Proper Shipping Name : Ethylene Glycol Monobutyl Ether
- Marine Pollutant : No

Air Transport IATA/ICAO

- UN. Number : 1993
- Class : 3
- Packing Group : III
- Hazard Symbol : Flammable Liquid
- Proper Shipping Name : Ethylene Glycol Monobutyl Ether

15. Regulatory Information

EC Label Name : Ethylene Glycol Monobutyl Ether

EC Classification : Harmful.

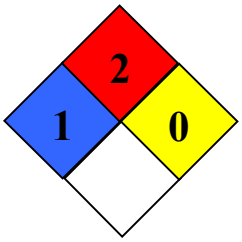
EINECS (EC) : 203-905-0

EC Annex I Number : 603-014-00-0

MITI(JAPAN) : 2-407

16. Other Information

National Fire Protection Association (USA) :



Health

Fire Hazard

Reactivity

Specific Hazard

MSDS Distribution : The information in this document should be made available to all who may handle the product.

Prepared By : Quality Control Department.
Global Chemie ASCC Limited

Disclaimer : The information contained herein is based on our current knowledge of the underlying data and is intended to describe the product for the purpose of health, safety and environmental requirements only. No warranty of guarantee is expressed or implied regarding the accuracy of these data or the results to be obtained from the use of the product.

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