SAFETY DATA SHEET

BUTYL CARBITOL

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

Product name:	BUTYL CARBITOL
Recommended use:	Chemical for industry
Manufacturer/Supplier:	**MODERN CHEMICAL CO.,LTD.**
	82/80 Soi Ekamai 22 (Nuannoi), Sukhumvit 63,
	Klong Tan Nuea, Watthana, Bangkok 10110
Telephone No:	0-2715-0897-9, 0-2392-3410-3
Fax No:	0-2715-0908-9, 0-2391-1571-2
Emergency Telephone No:	0-2715-0897-9, 0-2392-3410-3

2. HAZARDS IDENTIFICATION

Label elements

Pictogram

Signal word Warning

Hazard statement(s):

1.) Combustible liquid.

2.) Harmful in contact with skin.

3.) Causes serious eye irritation.

4.) May cause respiratory irritation.

Precautionary statement(s):

1.) Keep container in a well-ventilated place.

2.) Keep away from high temperature.

3.) Wear eye protect or face protect equipment.

4.) Wash hand thoroughly after handling.

5.) Call a POISON CENTER or doctor/hospital or if you feel unwell.

6.) IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

7.) If irritation persists: Get medical advice/attention.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonym: Butyl diglycol, Butoxy diglycol, Butyl dioxitol, 2-(2-Butoxyethoxy) ethanol, Butoxyethoxyethanol, Diethylene glycol butyl ether, Diethylene glycol monobutyl ether, diethylene glycol butyl ester, Butyl carbitol, Butoxydiethylene glycol, o-Butyl diethylene glycol, Butadigol, Diglycol monobutyl ether, Butyl digol, Butyl oxitol glycol ether, 3,6-Dioxa-1-decanol, 2,2-Oxybis-ethanol, monobutyl ether, DBGE

Ingredients	% (w/w)	CAS NO.
BUTYL CARBITOL	100	112-34-5

4. FIRST AID MEASURES

General advice: Consult a physician. Show this safety data sheet to the doctor in attendance.

Inhalation: If breathed in, move person into fresh air. If not breathing give artificial respiration Consult a physician.

Skin contact: Remove contaminated clothing and boots immediately. washing affected area thoroughly with soap and water at least 15 minutes. Seek medical attention. Clean and dry polluted clothing and boots before use again.

Eye contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

Ingestion: Do not induce vomiting. Never give anything by mouth to unconscious person. Refer for medical attention.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media:

Use water spray, alcohol-resistant foam, Chemical-resistant powder, Mist or carbon dioxide.

Unsuitable Extinguishing Media:

No data available.

Specific hazards arising from Chemicals:

Carbon oxides

Special protective equipment for fire-fighters:

Wear positive pressure self-contained breathing apparatus. And fire fighting equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation.

Environmental precautions: Do not allow contact with soil, surface or ground water.

Methods and Material for Containment and Clean Up:

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

7. HANDLING AND STORAGE

Precautions for Safe Handling & Product Transfer:

Do not handle near heat, sparks, or flame. Avoid content with incompatible agent. Use only with adequate ventilation/personal protection. Avoid contact with eye, skin and clothing. Do not enter storage area unless adequately ventilated. Metal containers involved in the transfer of this material should be grounded and bonded. It is recommended that any liquid product exposed to air not be highly concentrated by evaporation without first assuring that no peroxide is present. Alternately, positive steps should be taken to reduce any accumulated peroxides to a safe level before concentrating the liquid. Spills of these organic material on hot fibrous insulations may lead to lowering of the autoignition temperature possibly resulting in spontaneous combustion.

Conditions for Safe Storage & Unsuitable Materials:

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Store away from incompatible substance and the food containers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits: TWA 10 ppm

Appropriate Engineering Controls: The product should only be used in ventilation hoods and fans.

Individual Protection Measures

Respiratory protection: When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Hand protection: Use chemical resistant glove appropriate to conditions of use. Acid-resistant gloves complying with EN374 (e.g. neoprene or other type giving suitable protection

Eye protection: Chemical anti-splash spectacle.

Skin and body protection: Appropriate protective clothing should be worn to prevent skin contact.

Hygiene measures: Selection of appropriate personal protective equipment should be based on an evaluation of the performance characteristics of the protective equipment relative to the task(s) to be performed, conditions present, duration of use, and the hazards and/or potential hazards that may be encountered during use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form, Color and Odor : liquid, colourless,butyl-like	**Evaporation rate :** 0.01 (Butyl Acetate = 1)
Melting Point : -68 °C	**Specific gravity :** 0.952 – 0.956 g/cm^3 at 20 °C
pH : 6 – 7.5	**Solubility in water :** Soluble
Boiling point : 228-234 °C	**Viscosity :** 6.1 mm^2/s at 20 °C
Vapour pressure : 0.01 mmHg at 20 °C , 0.027 hPa at 20 °C	**Vapour density :** 5.6 (Air = 1)
Lower explosive limits : 0.85 %Vol	**Upper explosive limits :** 24.6 %Vol
Auto-ignition temperature : 204 - 210°C	**Flash Point :** 78 - 114 °C
Odour threshold : N/A	**Flammability (solid, gas) :** N/A
Decomposition temperature : N/A	**Solubility in other solvents :** Ethanol, Ether, Acetone, Organic Solvent and Oil
n-octanol/water partition coefficient (log P_{ow}) : 1.0 at 20 °C	

10. STABILITY AND REACTIVITY

Chemical stability: Stable under recommended storage conditions. May formed as the explosive peroxide. Avoid being long term stored or contacted with the air, light or stored, used at the temperature higher than the room temperature.

Reactions: Will not happen

Possibility of Hazardous Reactions: Will not happen

Conditions to avoid: Avoid contact with strong oxidizers, excessive heat, spark, open flame. Oxidize and other ignition.

Materials to avoid: Acid, base, oxidants, oxidizers, alkalis, strong acid, strong base, strong oxidants.

Hazardous decomposition products: Carbon oxides**.**

11. TOXICOLOGICAL INFORMATION

Acute toxicity: LD50 (Oral, rat): 450 mg/kg
LD50 (Dermal, rabbit): 2700 - 2764 mg/kg
LC0 (Inhalation, rat): >2.1 mg/l-4h

Sensitization: Direct skin contact may cause slightly stimulation, and lead to skin red, rough, and skim. May be harmful if swallowed and enters airways. Ingest the material may cause nausea, vomiting, diarrhea, and Central nervous system inhibition which will lead to headache, dizziness, sleepiness, seizure. Causes serious eye irritation.

Chronic toxicity: Excessive and repeat expose to the material may damage the liver and kidney. Repeat or long-term expose skin or eyes to the substance may cause dermatitis or conjunctivitis.

Further toxicological information: No data available

12. ECOLOGICAL INFORMATION

Toxicity

Toxicity to fish: LC50 - Lepomis macrochirus: 1300000 ug/l - 96 h

Toxicity to daphnia and other aquatic invertebrates: No data available

Toxicity to algae: Low toxicity

Toxicity to bacteria: Low toxicity

Biodegradability Remarks: 92% Rapidly degradable. (After 28 days in a ready biodegradability and low acute toxicity)

If released to the soil, the material is expected not to volatile from the surface of dry soil, volatile from wet soil surface is also not an important flow mechanism.

Release to the water, the material will not be absorbed by the suspension or precipitation particles.

Released into the air, this material will exist in the atmosphere with gas phase, which will react with the hydroxyl free radical of photon chemical products, the half-life is 7.2 hours.

Bioaccumulative Potential: The biological organism of bio-concentration is expected to be low.

Mobility: It is expected to have highly mobility in the soils.

Affected in any other way: No data available

13. DISPOSAL CONSIDERATIONS

Material Disposal: Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.
Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an after burner and scrubber.

Container Disposal: Dispose of as unused product.

14. TRANSPORT INFORMATION

ADR/RID

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods.

15. REGULATORY INFORMATION

Other international regulations

Global Inventory Status:

The ingredients of this product are compliant with the following chemical inventory requirements or exemptions.

*Additional Explanatory Status Statements follow the table, as necessary.

Country/Region	**Inventory**	**Status Description**
Australia	AICS	Compliant
Canada	DSL	Compliant
China	IECSC	Compliant
Europe	REACH	See REACH Compliance Statement
Japan	ENCS	Compliant
Korea	KECI	Compliant
New Zealand	NZIoC	Compliant
Philippines	PICCS	Compliant
United States of America	TSCA	Compliant
Taiwan	TCSCA	Compliant

REACH status

If the product has been purchased from any company of the LyondellBasell group of companies registered in the European Union, we confirm that the chemical substance in this product has been pre-registered or, where required under REACH, registered, and that we have the intention to proceed with any required registration in accordance with the deadlines set forth in REACH. (Regulation (EU) No. 1907/2006)

Applicable Regulation:

1. Labor Safety and Health Law.
2. Regulation of Labeling and Hazard communication of Dangerous and Harmful Materials.
3. Industrial waste storage and disposal facilities standard.
4. Public dangerous good and High-pressure flammable gas setting standard & Safety management approach.

16. OTHER INFORMATION

Modern Chemical Co.,Ltd. provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the

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