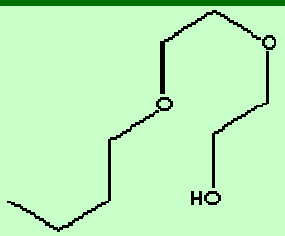
BUTYL CARBITOL



PRODUCT IDENTIFICATION

CAS NO.	112-34-5
EINECS NO.	203-961-6
FORMULA	$C_4H_9(OCH_2CH_2)_2OH$
MOL WT.	162.23
H.S. CODE	2909.44
TOXICITY	Oral rat LD50: 5660 mg/kg
SYNONYMS	Butoxyethoxyethanol; Diglycol Monobutyl Ether; Butoxydiethylene Glycol; 2-(2-Butoxyethoxy)-Ethanol; Butyl Oxitol Glycol Ether; O-Butyl Diethylene Gycol; Diethylene Glycol N-Butyl ether; Butadigol; Butyl Digol; Butyl Diglycol; Butyl Dioxitol; Butyl Carbitol; Butoxydiglycol; Dowanol DB®; 3,6-Dioxa-1-decanol; 3,6-Dioxadecanol; butoxydiethylene glycol; o-butyl diethylene glycol; butyl dioxitol; Butyl Ethyl Cellosolve;
DERIVATION CLASSIFICATION	

PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE	clear hydroscopic liquid
MELTING POINT	-68 C
BOILING POINT	231 C
SPECIFIC GRAVITY	0.955
SOLUBILITY IN WATER	Miscible
AUTOIGNITION	204 C
pH	
VAPOR DENSITY	5.6
NFPA RATINGS	Health: 1 Flammability: 1 Reactivity: 0
REFRACTIVE INDEX	1.4316
FLASH POINT	110 C
STABILITY	Stable under ordinary conditions

APPLICATIONS

Glycol ethers, with the combination of ether, alcohol and hydrocarbon chain in one molecule, provide versatile solvency characteristics with both polar and non-polar properties. The chemical structure of long hydrocarbon chain resist to solubility in water, while ether or alcohol groups introduce the promoted hydrophilic solubility performance. This surfactant-like structure provides the compatibility between water and a number of organic solvents, and the ability to couple unlike phases. Glycol ethers are characterized by their wide range of hydrophilic/hydrophobic balances. glycol ethers are used as diluents and levelling agents in the manufacture of paints and baking finishes. Glycol ether series are used in the manufacture of nitrocellulose and combination lacquers. They are used as an additive in brake fluid. They are formulated for dying textiles and leathers and for insecticides and herbicides. They provides performance in cleaners products with oil-water dispersions. They are used in printing industries as they have a slow evaporation rate. They are used as a fixative for perfumes, germicides, bactericides, insect repellents and antiseptic. They are used as an additive for jet fuel to prevent ice buildup. Thje term of cellosolve refers to ethylene glycol monoethyl ether or a group of glycol ether solvent as below.

Glycol ether	Cellosolve	CAS RN
Tris(ethylene glycol monobutyl ether) phosphate	Tributyl cellosolve phosphate	78-51-3
Ethylene glycol monoethyl ether acrylate	Cellosolve acrylate	106-74-1
Ethylene glycol isopropyl ether	Isopropyl cellosolve	109-59-1

Ethylene glycol monomethyl ether	Methyl cellosolve	109-86-4
Ethylene glycol monomethyl ether acetate	Methyl cellosolve acetate	110-49-6
Ethylene glycol dimethyl ether	Dimethyl cellosolve	110-71-4
Ethylene glycol monoethyl ether	Cellosolve	110-80-5
Ethylene glycol monomethyl ether oleate	Methyl cellosolve oleate	111-10-4
Ethylene glycol monoethyl ether acetate	Ethyl cellosolve acetate	111-15-9
Ethylene glycol monoallyl ether	Allyl cellosolve	111-45-5
Ethylene glycol monobutyl ether	Butyl cellosolve	111-76-2
Diethylene Glycol Monoethyl Ether	Carbitol cellosolve	111-90-0
Ethylene glycol monobutyl ether acetate	Butyl cellosolve acetate	112-07-2
Ethylene glycol monohexyl ether	Hexyl cellosolve	112-25-4
Diethylene glycol monobutyl ether	Butyl carbitol	112-34-5
Ethylene glycol dibutyl ether	Dibutyl cellosolve	112-48-1
Bis(ethylene glycol monomethyl ether) phthalate	Dimethyl cellosolve phthalate	117-82-8
Bis(ethylene glycol monobutyl ether) phthalate	Dibutyl cellosolve phthalate	117-83-9
Ethylene glycol o,p-Dichlorophenyl ether	2,4-Dichlorophenyl cellosolve	120-67-2
Ethylene glycol monophenyl ether	Phenyl cellosolve	122-99-6
Ethylene glycol monomethyl ether acetylricinoleate	Methyl cellosolve acetylricinoleate	140-05-6
Bis(ethylene glycol monobutyl ether) adipate	Dibutyl cellosolve adipate	141-18-4
Ethylene glycol monobenzyl ether	Benzyl cellosolve	622-08-2
Ethylene glycol diethyl ether	Diethyl cellosolve	629-14-1
Ethylene glycol monopropyl ether	Propyl cellosolve	2807-30-9
Ethylene glycol monomethyl ether acrylate	Methyl cellosolve acrylate	3121-61-7
Ethylene glycol butyl ethyl ether	Butyl ethyl cellosolve	4413-13-2
Ethylene glycol monoisobutyl ether	Isobutyl cellosolve	4439-24-1
Ethyleneglycol 2-ethylbutyl ether	Ethylbutyl cellosolve	4468-93-3
Ethylene glycol monobutyl ether acrylate	Butyl cellosolve acrylate	7251-90-3
Ethylene glycol monoheptyl ether	Heptyl cellosolve	7409-44-1
Ethylene glycol monomethylpentyl ether	2-Methylpentyl cellosolve	10137-96-9
Ethylene glycol o,p-Dichlorophenyl methyl ether	2,4-Dichlorophenyl methyl cellosolve	10140-84-8
Ethylene glycol monobutyl ether phosphate	Butyl cellosolve phosphate	14260-98-1
Poly(cellosolve silicate)	Poly(cellosolve silicate)	37338-04-8
Ethylene glycol monophenyl ether acrylate	Phenyl cellosolve acrylate	48145-04-6
Ethylene glycol monoethyl ether oleate	Cellosolve oleate	68134-05-4
Ethylene glycol monobutyl ether sebacate	Butyl cellosolve sebacate	68186-66-3
Ethylene glycol monobutyl ether phosphate potassium salt	Butyl cellosolve, phosphate potassium salt	68389-63-9
Ethylene glycol monobutyl ether polyphosphate	Butyl cellosolve polyphosphate	68514-82-9
Ethylene glycol monohexyl ether phosphate	Hexyl cellosolve phosphate	68814-14-2

The term of glyme refers to glycol dimethyl ether. Monoglyme, diglyme, triglyme are ethylene glycol dimethyl ether, Diethylene glycol dimethyl ether, and triethylene glycol dimethyl ether respectively. Ethylene glycol dimethyl ether is readily soluble in water. Glymes, dimethyl ethers, have two terminal methyl groups which offer stability and high solvency. They are used as a higher boiling alternative to diethyl ether or THF. Glyme forms chelate and are useful as bidentate ligands. They are useful as solubilizers and phase transfer catalysts. Glymes offer the property required as an inert reaction medium chemical reaction due to their low chemical reactivity. They are suitable particularly for organometallic and polymerization reactions. Glycol ethers which contain hydroxyl group are also useful chemical intermediate. The hydroxyl group will undergo reaction with aldehydes (or ketones) to produce hemiacetals (or acetals), with epoxides to produce polyether alcohols, with halogenating agents to produce alkoxy alkyl halides, with carboxylic acid compounds or inorganic acids to produce a number of esters.

Glycol dimethyl ether	Glyme	CAS RN
Ethylene glycol dimethyl ether	Monoglyme	110-71-4
Diethylene glycol dimethyl ether	Diglyme	111-96-6
Diethylene glycol diethyl ether	Ethyl diglyme	112-36-7
Triethylene glycol dimethyl ether	Triglyme	112-49-2
Diethylene glycol dibutyl ether	Butyl Diglyme	112-73-2
Tetraethylene glycol dimethyl ether	Tetraglyme	143-24-8
Ethylene glycol diethyl ether	Ethyl monoglyme	629-14-1
Polyethylene glycol dibutyl ether	Polyglycol BB	31885-97-9
Dipropylene glycol dimethyl ether	Proglyme	111109-77-4

SALES SPECIFICATION	
APPEARANCE	clear hydroscopic liquid
DISTILLATION IBP	225 C min
DISTILLATION DP	235 C max
SPECIFIC GRAVITY	0.952 - 0.956
COLOR, APHA	15 max
MOISTURE	0.1% max
ACID NUMBER	0.1% max

TRANSPORTATION	
PACKING	200kgs in drum
HAZARD CLASS	Not regulated
UN NO.	

OTHER INFORMATION