Butyl glycol (Butyl Cellosolve – EGMBE)

1. IDENTIFICATION

CHEMICAL NAME: 2-butoxyethanol

CHEMICAL FORMULA: $C_4H_9OCH_2CH_2OH$

MOLECULAR WEIGHT: 118,17

CAS No.: 111-76-2

EINECS No.: 203-905-0

OTHER NAMES: ethylene glycol monobutyl ether, butyl cellosolve

Product description

A fast-evaporating glycol ether with an excellent balance of hydrophilic and hydrophobic character; excellent active solvency and coupling properties

Butyl CELLOSOLVE glycol ether is a very versatile solvent product with a good balance of many different properties. With a nearly equal balance of hydrophobic and hydrophilic character, Butyl CELLSOLVE glycol ether provides excellent performance in coatings, cleaners, and many other types of products. It is one of our fastest evaporating glycol ethers. Butyl CELLOSOLVE glycol ether is compatible with a wide range of resin types, and it also offers 100% water solubility.

2. FEATURES AND BENEFITS

Typical Physical Properties [(1)]

Boiling point @ 760 mmHg, 1.01 bar	340°F	171°C
Flash point	149°F	65°C
Freezing point	-107°F	-77°C
Vapor pressure@ 20°C — extrapolated		0.66 mmHg 0.89 mbar
Specific gravity (25/25°C)		0.901
Density @ 20°C @ 25°C	7.53 lb/gal 7.49 lb/gal	0.902 g/cm³ 0.898 g/cm³
Viscosity (cP or mPa•s @ 25°C)		2.9
Surface tension (dynes/cm or mN/m @ 25°C)		27.4
Specific heat (J/g/°C @ 25°C)		2.38
Heat of vaporization (J/g) at normal boiling point		348
Net heat of combustion (kJ/g) — predicted @ 25°C		30.0
Autoignition temperature	471°F	224°C
Evaporation rate	n-butyl acetate = 1.0) (diethyl ether = 1.0)	0.079 154
Solubility, g/100 g @ 25°C Solvent in water Water in solvent		 - -
Hansen solubility parameters (J/cm³)1/2 _d (Dispersion) _p (Polar) _h (Hydrogen bonding)		 16.0 7.6 12.3

Flammable limits (vol.% in air)	
Lower (measured @ 170°C)	1.13
Upper (measured @ 180°C)	10.60

(1) These properties are typical but do not constitute specifications.

3. APPLICATION

- Active solvent for solvent-based coatings.
- Coalescent for industrial water-based coatings.
- Coupling agent for architectural water-borne coatings.
- Coupling agent and solvent in household and industrial cleaners, rust removers, hard surface cleaners, and disinfectants.
- Primary solvent in solvent-based silk screen printing inks.
- Coupling agent for resins and dyes in water-based printing inks.
- Solvent for agricultural pesticides.

4. BENEFITS

- Powerful solvency
- Coupling ability
- Coalescing ability
- Moderate evaporation rate
- High dilution ratio
- Wide range of applications

5. PRODUCT STEWARDSHIP

Dow encourages its customers and potential users to review their applications from the standpoint of human health and environmental aspects. To help ensure that Dow products are not used in ways for which they are not intended or tested, Dow personnel will assist customers in dealing with environmental and product safety considerations. Dow literature, including Material Safety Data Sheets, should be consulted by customers and potential users prior to use.