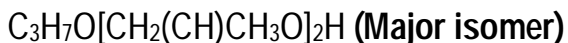




DOWANOL DPnP

Dipropylene Glycol n-Propyl Ether



A slow-evaporating glycol ether with an excellent balance of hydrophilic and hydrophobic character; provides outstanding coalescing and film properties

Introduction

DOWANOL* DPnP glycol ether has a slower evaporation rate than DOWANOL PnP glycol ether, and it is slightly more hydrophobic. Yet overall, DOWANOL DPnP glycol ether has a near-midrange balance between hydrophobic and hydrophilic character, and it offers significant water solubility. This product is a good choice in coatings; it offers very good coalescing performance in blends with more hydrophobic materials such as DOWANOL PPh or PnB glycol ethers. DOWANOL DPnP glycol ether can also be blended with other materials to replace Butyl CELLOSOLVE™ glycol ether (formerly known as DOWANOL EB glycol ether).

Physical properties†

Molecular weight (g/mol)		176.2
Boiling point @ 760 mmHg, 1.01 bar	415°F	213°C
Flash point (Setaflash Closed Cup)	190°F	88°C
Freezing point	<-103°F	<-75°C
Vapor pressure@ 20°C — extrapolated		0.08 mmHg .11 mbar
Specific gravity (25/25°C)		0.919
Density @ 20°C	7.68 lb/gal	0.921 g/cm ³
@ 25°C	7.65 lb/gal	0.916 g/cm ³
Viscosity (cP or mPas @ 25°C)		11.4
Surface tension (dynes/cm or mN/m @ 25°C)		27.8
Specific heat (J/g°C @ 25°C)		1.94
Heat of vaporization (J/g) at normal boiling point		265
Net heat of combustion (kJ/g) — predicted @ 25°C		29.7
Autoignition temperature	401°F	205°C
Evaporation rate	(n-butyl acetate = 1.0) (diethyl ether = 1.0)	0.014 903
Solubility, g/100 g @ 25°C		
Solvent in water		17.2 (15 wt%)
Water in solvent		22.5 (18.5 wt%)

Hansen solubility parameters (J/cm ³) ^{1/2}	
_d (Dispersion)	15.0
_p (Polar)	3
_h (Hydrogen bonding)	9.6
Flammable limits (vol.% in air)	
Lower (measured @ 25°C)	0.68
Upper	--

†The physical property data listed here are considered to be typical properties, not specifications.

Classification/Registry Numbers††

CAS Number	29911-27-1
AICS (Australia)	29911-27-1
DSL (Canada)	Pending – contact a Dow representative
ECL (Korea)	Not registered
EINECS (EU)	249-949-4
MITI (Japan)	7-97
TSCA (U.S.)	29911-27-1

†† NOTE: Classifications apply only to this glycol ether product. It is the responsibility of the formulator to ensure that the final finished product complies with the regulations of a given country prior to its sale or distribution in that country.

Suggested Applications

- Coalescent for water-borne latex coatings.
- Active solvent for solvent-borne coatings.

Features

- Colorless
- Low odor
- Moderately soluble in water (19 ml/100 ml)
- Good chemical stability
- Excellent solvent properties
- Very efficient surface tension reduction
- Low toxicity
- Wide range of applications

NOTE: Consult the appropriate Material Safety Data Sheet for safety and handling guidelines for this product.

*The Dow Chemical Company
Midland, Michigan 48674 U.S.A.

In The United States And Canada:
1-800-447-4369
Fax: 1-989-832-1465

In Europe: +800 3 694 6367
Toll Phone: +32 3 450 2240
Toll Fax: +32 3 450 2815

In The Pacific: +800 7776 7776
Fax: +800 7779 7779
In Other Global Areas: 1-989-832-1556
Fax: 1-989-832-1465

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