EASTMAN

Technical Data Sheet

Eastman™ DP Solvent

Applications

- Architectural coatings
- Auto oem
- Auto refinish
- Brake fluids
- Graphic arts
- Marine
- Process solvents
- Wood coatings

Key Attributes

- Good coupling efficiency
- Good solvent activity
- High blush resistance
- High dilution ratio
- LVP-VOC
- Low volatility/Low vapor pressure
- Mild odor
- Miscible with water and most organic liquids
- Predicted to be readily biodegradable*
- Slow evaporation rate

Product Description

Eastman™ DP Solvent (Diethylene Glycol Monopropyl Ether) is a slow evaporating, water-miscible solvent that is useful in solution and water-based coatings. It is an active solvent for many coating materials, including nitro-cellulose, acrylic copolymers, epoxy resins, chlorinated rubber, and alkyd resins. In water-based coatings, this solvent demonstrates very good coupling efficiency with resin systems to improve solution homogeneity. Its low odor is advantageous in formulating printing inks and can be used in aqueous cleaners.

*Modeled using The Estimation Programs Interface (EPI) Suite™ (EPA), BIOWIN v4.10 module

Typical Properties

Property	Test Method	Typical Value, Units
General		
Acidity		
as Acetic Acid		0.01 wt % max.
Assay		99.0 wt % min.
Autoignition Temperature	D 2155	204 °C (400 °F)
Boiling Point @ 760 mm Hg		
Dry Point		220 °C (428 °F)
Initial		210 °C (410 °F)
Color		
Pt-Co		10 max.
Critical Pressure		27.8 ATM
Critical Temperature		367.9 °C
Critical Volume		484.1 ml/g·mol
Dilution Ratio		
Toluene		4.6
VMP Naphtha		1.6
Electrical Resistance		0.1 Megohms
Empirical Formula		$C_7H_{16}O_3$
Evaporation Rate		
(ether = 1)		1210.2
(n-butyl acetate = 1)		0.01
Expansion Coefficient, per °C		
@ 20°C		0.00096

Explosive Limits in Air	
Lower @ 122°C	0.85 Vol %
Fire Point	103 °C (217 °F)
Flash Point	
Tag Closed Cup	93 °C (200 °F)
Tag Open Cup	103 °C (217 °F)
Freezing Point	<-90 °C (-130 °F)
Hansen Solubility Parameters	
Hydrogen Bonding	5.5
Nonpolar	7.8
Polar	3.5
Total	10.2
Heat of Combustion	-962.9 kcal/g·mol
Heat of Vaporization	14900 cal/g·mol
Liquid Heat Capacity	
@ 25°C	75.03 cal/(g*mol)(°C)
Liquid Viscosity	
@ 25°C	4.1 cP (mPa·s)
Molecular Weight	148.2
Nitrocellulose Solubility	Active
Purity	99 wt % min.
Refractive Index	
@ 20°C	1.429
Solubility	
in Water, @ 20°C	Complete
Water in, @ 20°C	Complete
Specific Gravity	
@ 20°C/20°C	0.97
Surface Tension	
@ 20°C	32.3 dynes/cm
Vapor Density	
(air = 1)	5.1
Vapor Pressure	
@ 20°C	0.05 mm Hg
@ 25°C	0.03 mm Hg
@ 55°C	0.11 kPa
Water	0.1 wt % max.
Wt/Vol	
@ 20°C	0.97 kg/L (8.09 lb/gal)

Comments

Properties reported here are typical of average lots. Eastman makes no representation that the material in any particular shipment will conform exactly to the values given.

2/28/2018 11:35:39 AM