EASTMAN

Technical Data Sheet

Eastman EastaPure™ DB Solvent

Applications

- Lcd displays
- Process solvents

Key Attributes

- High Purity/Low Trace Metals
- High boiling
- High solvency
- Inert - Food use with limitations
- Inert - Nonfood use
- Slow evaporation rate
- Water-miscible

Product Description

Eastman EastaPure™ DB Solvent (Diethylene Glycol Monobutyl Ether) is a high boiling, slow evaporating glycol ether providing low trace metals content for sensitive electronic applications. High-purity specifications (low trace metals) are required for solvents in semiconductor chip manufacturing, and special handling and storage procedures are used to maintain the high-purity specifications. Eastman EastaPure™ DB Solvent is being presented for photoresist applications/formulations, specifically for photoresist removers/strippers.

The chemical substances for this product are listed as Inert Ingredients Permitted for Use in Nonfood Use Pesticide Products, and in Food Use Pesticide Products with limitations, under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). For details on specific permissions, click here .

Typical Properties

Property	Typical Value, Units
General	
Autoignition Temperature	204 °C (400 °F)
Blush Resistance @ 80°F (26.7°C)	85 % RH
Boiling Point @ 760 mm Hg	230-235 °C (441-455 °F)
Color Pt-Co	10 max.
Critical Pressure	25.3 ATM
Critical Temperature	380.8 °C
Critical Volume	526 ml/g·mol
Dilution Ratio Toluene VMP Naphtha	 3.9 1.9
Electrical Resistance	<0.3 Megohms
Empirical Formula	$C_8H_{18}O_3$
Evaporation Rate (ether = 1) (n-butyl acetate = 1)	 4034 0.003
Expansion Coefficient, per °C @ 20°C	 0.00085
Fire Point	117 °C (242 °F)
Flammability Limits in Air, % by Volume	

Lower @ 135°C	0.85 Vol %
Upper @ 199°C	24.6 Vol %
Flash Point	
Cleveland Open Cup	111 °C (232 °F)
Freezing Point	-76 °C (-105 °F)
Hansen Solubility Parameters	
Hydrogen Bonding	5.2
Nonpolar	7.8
Polar	3.4
Total	10
Heat of Combustion	-1109 kcal/g·mol
Heat of Vaporization	12920 cal/g·mol
Liquid Heat Capacity	
@ 54°C	80.62 cal/(g*mol)(°C)
Liquid Viscosity	
@ 25°C	4.7 cP (mPa·s)
Maximum Incremental Reactivity (MIR)	2.7
Molecular Weight	162.23
Nitrocellulose Solubility	Active
Refractive Index	
@ 20°C	1.4316
Solubility	
in Water, @ 20°C	Complete
Water in, @ 20°C	Complete
Specific Gravity	
@ 20°C/20°C	0.955
Surface Tension	
@ 20°C	30 dynes/cm
Upper Limits for Trace Metals	
Aluminum	25 ppm, max
Barium	25 ppm, max
Cadmium	25 ppm, max
Calcium	25 ppm, max
Chromium	25 ppm, max
Cobalt	25 ppm, max
Copper	25 ppm, max
Gallium	25 ppm, max
Germanium	25 ppm, max
Iron	25 ppm, max
Lead	25 ppm, max
Lithium	25 ppm, max
Magnesium	25 ppm, max
Manganese	25 ppm, max
Nickel	25 ppm, max
Potassium	25 ppm, max
Silver	25 ppm, max
Sodium	25 ppm, max
Strontium	25 ppm, max
Titanium	25 ppm, max
Zinc	25 ppm, max
Vapor Density	
(air = 1)	5.6
@ 20°C	0.02 mm Hg
@ 55°C	0.04 kPa
Wt/Vol	
	0.96 kg/L (7.94 lb/gal)

@ 20°C

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.

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