EASTMAN

Technical Data Sheet
Eastman™ MPK

Applications

- Aerospace
- Aerospace coatings
- Architectural coatings
- Auto oem
- Auto refinish
- Automotive
- Electronic chemicals
- General industrial coatings
- Gravure printing inks
- Industrial maintenance
- Inkjet printing inks
- Intermediates
- Marine
- Paints & coatings
- Process additives
- Process solvents
- Protective coatings
- Truck/bus/rv
- Wood coatings

Key Attributes

- Excellent solvent activity
- High dilution ratio
- Inert - Nonfood use
- Low density
- Medium evaporation rate
- Meets Aerospace NESHAP compliance
- Non-HAP*
- Non-SARA
- REACH compliant
- Readily biodegradable
- Urethane grade

Product Description

Eastman™ MPK (Methyl n-Propyl Ketone) is a medium evaporating, urethane-grade solvent. It is an active solvent for most synthetic resins including acrylics, polyesters, cellulosics, epoxies, vinyls, and alkyds. Its high solvency, low density, and medium evaporation rate make it attractive as a letdown solvent for high-solids resins used in formulating coatings with low VOC content. It is used in gravure printing inks and also provides excellent performance for a wide range of cleaning and surface preparation applications for the transportation industry.

Eastman™ MPK - Substitution for Aerospace Cleaning Applications:
From cleaning to pre-treatment, tests prove Eastman™ MPK is an effective non-HAP solvent alternative to MEK and toluene. With a vapor pressure of 27.8 mm @ 20°C, well below the 45 mm limit allows for compliance to NESHAP (National Emission Standards for Hazardous Air Pollutants) requirements for hand-wipe cleaning operations for aerospace.

Eastman™ MPK satisfies the rigorous aerospace performance requirements. It evaporates more slowly than MEK solvent due to its larger molecule. This property allows for much of the solvent to remain on the wipe instead of emitting into the air and extends the useful life of the wipe.

*Eastman™ MPK (Methyl n-Propyl Ketone) is not on EPA's HAP or SARA list, but it does contain <= 10% MIBK, which is on both lists.

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

Typical Properties

Property	Typical Value, Units
General	
Acidity	
as Acetic Acid	0.01 wt % max.

Assay	90.0 wt % min.
Autoignition Temperature	449 °C (840 °F)
Azeotropes	
BP	83.3 °C (181.9 °F)
Wt % Water	19.5 wt %
Blush Resistance	
@ 80°F (26.7°C)	70 % RH
Boiling Point @ 760 mm Hg	
Dry Point	105 °C (221 °F)
Initial	101 °C (214 °F)
Color	
Pt-Co	15 max.
Critical Pressure	36.5 ATM
Critical Temperature	287.9 °C
Critical Volume	301 ml/g·mol
Dilution Ratio	
Toluene	3.9
VMP Naphtha	1
Electrical Resistance	0.3 Megohms
Empirical Formula	$C_5H_{10}O$
Evaporation Rate	
(ether = 1)	5.3
(n-butyl acetate = 1)	2.3
Expansion Coefficient, per °C	
@ 20°C	0.0012
Flash Point	
Tag Closed Cup	8 °C (46 °F)
Freezing Point	-86 °C (-123 °F)
Hansen Solubility Parameters	
Hydrogen Bonding	2.3
Nonpolar	7.8
Polar	3.7
Total	8.9
Heat of Combustion	-688.3 kcal/g·mol
Heat of Vaporization	7998 cal/g·mol
Liquid Heat Capacity	
@ 25°C	44 cal/(g*mol)(°C)
Liquid Viscosity	
@ 25°C	0.7 cP (mPa·s)
Maximum Incremental Reactivity (MIR)	3.07
Methyl Isobutyl Ketone	10 % max
Molecular Weight	86.13
Nitrocellulose Solubility	Active
Refractive Index	
@ 20°C	1.3902
Solubility	
in Water, @ 20°C	3.1 wt %
Water in, @ 20°C	4.2 wt %
Specific Gravity	
@ 20°C/20°C	0.81
Surface Tension	
@ 20°C	26.6 dynes/cm
TLV PPM 1998	200
Vapor Density	
(air = 1)	2.9

Vapor Pressure	
@ 20°C	27.8 mm Hg
@ 55°C	19.2 kPa
Wt/Vol	
@ 20°C	0.81 kg/L (6.74 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.

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