

# Technical Data Sheet

## Eastman EastaPure™ MAK

### Applications

- Electronic chemical cleaners
- Electronic chemicals
- Photographic imaging film
- Photoresist solvents
- Photoresist strippers
- Process solvents

### Key Attributes

- Excellent resin solubility
- High Purity/Low Trace Metals
- High assay
- Inert - Food use with limitations
- Inert - Nonfood use

### Product Description

Eastman EastaPure™ MAK (Methyl n-Amyl Ketone) is a high-purity low-trace metal solvent for positive and negative photoresist formulations. It is tested to measure selected critical trace metals in parts-per-billion levels and has a minimum assay of 99.0%. EastaPure MAK can also be used in edge bead removal process after spin coating.

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
<b>General</b>	
Acidity as Acetic Acid	0.01 wt % max.
Assay	99.0 % min
Alcohol Content	0.2 wt % max.
Autoignition Temperature	393 °C (740 °F)
Azeotropes	
BP	95 °C (203 °F)
Wt % Water	48 wt %
Blush Resistance @ 80°F (26.7°C)	93 % RH
Boiling Point @ 760 mm Hg	147-153 °C (297-307 °F)
Color Pt-Co	5 max.
Critical Pressure	28.8 ATM
Critical Temperature	338.3 °C
Critical Volume	421 ml/g·mol
Dilution Ratio	
Toluene	3.9
VMP Naphtha	1.2
Electrical Resistance	0.4 Megohms
Empirical Formula	C <sub>7</sub> H <sub>14</sub> O
Evaporation Rate	30.2

(ether = 1)	
(n-butyl acetate = 1)	0.4
Expansion Coefficient, per °C	
@ 20°C	0.00104
Flammability Limits in Air, % by Volume	
Lower @ 66°C	1.11 Vol %
Upper @ 121°C	7.9 Vol %
Flash Point	
Tag Closed Cup	39 °C (102.2 °F)
Freezing Point	-33 °C (-27 °F)
Hansen Solubility Parameters	
Hydrogen Bonding	2
Nonpolar	7.9
Polar	2.8
Total	8.6
Heat of Combustion	-979.8 kcal/g·mol
Heat of Vaporization	9229 cal/g·mol
Liquid Heat Capacity	
@ 54°C	59.69 cal/(g·mol)(°C)
Liquid Viscosity	
@ 20°C	0.8 cP (mPa·s)
Maximum Incremental Reactivity (MIR)	2.8
Molecular Weight	114.19
Nitrocellulose Solubility	Active
Refractive Index	
@ 20°C	1.406-1.409
Solubility	
in Water, @ 20°C	0.5 %
Water in, @ 20°C	1.3 %
Specific Gravity	
@ 20°C/20°C	0.815-0.818
Surface Tension	
@ 20°C	26.1 dynes/cm
TLV PPM 1998	50
Upper Limits for Trace Metals	
Aluminium (Al)	10 ppb
Barium (Ba)	10 ppb
Cadmium (Cd)	10 ppb
Calcium (Ca)	10 ppb
Chromium (Cr)	10 ppb
Cobalt (Co)	10 ppb
Copper (Cu)	10 ppb
Gallium (Ga)	10 ppb
Germanium (Ge)	10 ppb
Iron (Fe)	10 ppb
Lead (Pb)	10 ppb
Lithium (Li)	10 ppb
Magnesium (Mg)	10 ppb
Manganese (Mn)	10 ppb
Nickel (Ni)	10 ppb
Potassium (K)	10 ppb
Silver (Ag)	10 ppb
Sodium (Na)	10 ppb
Strontium (Sr)	10 ppb
Titanium (Ti)	10 ppb

Zinc (Zn)	10 ppb
Vapor Density (air = 1)	3.9
Vapor Pressure @ 20°C	2.14 mm Hg
@ 55°C	2.8 kPa
Viscosity, Neat @ 20°C	0.77 cP
Water	0.05 wt % max.
Wt/Vol @ 20°C	0.82 kg/L (6.8 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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