

Appendix D

MEK Product Brochure

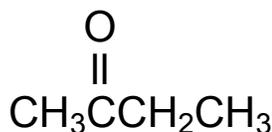
PRODUCT DESCRIPTION

1 of 2

Methyl Ethyl Ketone

(2-Butanone, MEK)

MW = 72.11



Methyl Ethyl Ketone, Chemical Abstracts
Registry
Number 78-93-3
Wiswesser Line Formula Chemical
Notation 2V1

Methyl Ethyl Ketone (MEK) is a clear, colorless, low-boiling organic liquid with a typical ketone odor. It is a fast evaporating solvent with an evaporation rate similar to ethyl acetate. Although not as volatile as acetone, Methyl Ethyl Ketone is similar to acetone in many respects. It is miscible with most organic solvents and is an excellent solvent for most natural and synthetic resins.

Methyl Ethyl Ketone is a highly versatile organic compound but finds its greatest utility as a solvent in the surface coatings industry. Its use as a solvent for vinyl lacquers is well established and

accounts for its largest use. Nitrocellulose lacquers consume large volumes of Methyl Ethyl Ketone and solubilization of acrylic coatings also contributes to the overall use of Methyl Ethyl Ketone by the surface coatings industry. MEK is preferred as a lacquer solvent, because high concentrations of resins possessing superior aliphatic and aromatic diluent tolerance can be readily achieved as low viscosity solutions.

Methyl Ethyl Ketone is also commonly used as a solvent for rubber cements and other natural and synthetic resins for adhesive use.

Other important applications are as an extraction solvent for the dewaxing of lube oil and as an intermediate in the production of antioxidants, perfumes and catalysts. Methyl Ethyl Ketone is also used by the hard wood pulping industry and in the production of smokeless powder. It is routinely used in printing inks, degreasing and cleaning fluids and as a component of the solvent system used in producing magnetic tape.

Methyl Ethyl Ketone as a chemical intermediate will undergo the typical reactions associated with the ketone class of compounds.

PRODUCT DESCRIPTION

2 of 2

Methyl Ethyl Ketone

Physical Properties

Autoignition Temperature, °C	515.5
Boiling Point at 760 mm Hg, °C	79.6
Boiling Point at 760 mm Hg, °F	175.3
Coefficient of Thermal Expansion per °C at 20°C	1.126 x 10 ⁻³
Critical Pressure, atmospheres	41.0
Critical Temperature, °C	252.5
Dielectric Constant, 20°C	15.45
Evaporation Rate (BuAc = 1)	5.7
Flammable Limits (lower limit, vol %)	2.0
(upper limit, vol %)	11.0
Flash Point, Tag Open Cup, °F	30
Tag Closed Cup, °F	20
Freezing Point, °C	-86.7
Heat of Combustion, kg-cal/g mole	582.3
Heat of Fusion, cal/g mole	1.78
Heat of Vaporization, btu/lb at 20°C	212.4
Molecular Weight	72.11
Refractive Index, n _D ²⁰	1.3787
Solubility at 20°C at wt % in water	26.8
water in	12.5
Specific Gravity, 20/20°C	0.8062
Specific Heat of Liquid, at 20°C, cal/g	.525
Surface Tension at 20°C, dynes/cm	24.6
Vapor Density (air = 1)	2.5
Vapor Pressure, at 20°C, mm Hg	77.5
Viscosity at 25°C, centipoise	0.40
Weight, pounds per gallon at 20°C	6.71

This information is based on our present state of knowledge and is intended to provide general notes on our products and their uses. It should therefore not be construed as guaranteeing specific properties of the products described or their suitability for a particular application. Any existing industrial property rights must be observed. The quality of our products is guaranteed under our General Conditions of Sale.

PB-020-2 05/00 9072

Dallas:

1601 West LBJ Freeway
Dallas, Texas 75234-6034
Tel.: 972 443-4000

Frankfurt:

Lurgialle 14
D-60439 Frankfurt am Main
Tel.: 0049/69-305-13300