

COA-SPECIFICATION

MMB

(3-Methoxy-3-Methyl-1-Butanol)

Applications at a glance

→ Air Freshener	→ Dry Soap
Electrical, Fan, Car type, Reed diffuser, Gel, Aerosol...	
→ Household Cleaner	→ Hand Cleaner
Kitchen, Air fan, Toilet, Bathroom, Floor, Multi purpose...	→ Insecticide and Pesticide
→ Industrial Cleaner	→ Ink and Coating
for Electronic, PCB, Optical, Metal parts, Precision parts...	

The main reasons why using MMB

Low toxicity	Geringe Toxizität
Amphipathic	Amphipatisch
Good solubilizer	Gutes Lösevermögen
Mild odor	Geruchsarm
To control evaporation speed	Konstantes Verdampfungsverhalten
Stable versus autoxidation	Stabil gegenüber Autoxidation
High Flash point	Hoher Flammpunkt
Biodegradable	Biologisch abbaubar
Faible toxicité	Baja toxicidad
Amphiphile	Anfipatico
Bonne propriété de solubilisation	Buena solubilidad
Faible odeur	Bajo olor
Permet un bon contrôle de la vitesse d'évaporation	Para controlar la velocidad de evaporación
Stable à l'auto-oxydation	Estable frente a la oxidacion
Point éclair élevé	Alto Punto de inflamación
Bonne biodégradabilité	Biodegradable

Specification of MMB

Appearance

Clear and Colorless Liquid

Color (APHA)

10 max

Specific Gravity (20 °C / 20 °C)

0.925 - 0.930

Distillation (760 mmHg)

IBP (°C) 168 min

DP (°C) 178 max

Acidity as acetic acid (Wt %)

0.01 max

Water (%)

0.2 max

Properties of MMB

Physical Properties

Formula	$C_6H_{10}O_2 = 118$	
Specific Gravity (@ 20 °C / 20 °C)	0.927	
Specific Heat	2.30 J/g	0.549 cal/g
Viscosity (@ 20 °C)	7.35 mPa·s	7.35 cps
Boiling Point (@ 760mmHg, 101 kPa)	174 °C	345 °F
Heat of Vaporization (@ b.p.)	384 J/g	91.8 cal/g
Freezing Point	< -50 °C	
Flash Point (Tag's CC)	68 °C	154 °F
Log Pow (@ 25 °C)	0.18	
Solubility in Water	INFINITE	
Solubility Parameter	9.88 (cal/cm ³) ^{1/2}	
Hansen Solubility Parameter		
Dispersion	15.1 (MPa) ^{1/2}	
Polar	4.7 (MPa) ^{1/2}	
Hydrogen Bonding	12.6 (MPa) ^{1/2}	
Total	20.2 (MPa) ^{1/2}	
Specific Electric Conductivity (@ 20 °C)	8.6 x 10 ⁻¹⁰ Ω ⁻¹ cm ⁻¹	
Vapor Density (air= 1)	4.1	
Refractive Index (@ 20 °C)	1.4275	
Expansion Coefficient	0.00079/deg	
Surface Tension (@ 20 °C)	29.9 mN/m	29.9 dyn/cm
Vapor Pressure (@ 20 °C)	0.07 kPa	0.5 mmHg
Evaporation Rate (n-BuAc= 100)	7	
Explosion Range	1.2 – 13.1 vol %	
Ignition Point	395 °C	743 °F
Dilution Ratio		
a) Toluene (NC, 1/2 sec)	4.7	
b) Toluene (Epoxy resin)	4.5	
c) Xylene (NC, 1/2 sec)	4.3	

Effect on Plastics

Plastics	Volume % vs Initial *
Rigid PVC	8
Soft PVC	9
Polyethylene (Low Density)	0
Polyethylene (High Density)	0
Polypropylene	0
Polystyrene	19
Polycarbonate	0
Polyacetal	0
PET	0
PBT	0
Polyphenylene Sulfide	0
6-Nylon	0
6,6-Nylon	0
Teflon®	0
Epoxy Glass	0
Acrylic Resin	Partially Dissolved
Phenol Resin	0
ABS	63

Effect on Elastomers

Elastomers	Volume % vs Initial *
Fluoro Rubber Viton®	82
Chloroprene Rubber	64
Butyl Rubber	0
Nitrile Rubber	115
Silicone Rubber	6
Ethylene Propylene Rubber	7
Natural Rubber	17
Urethane Rubber	129
SBR	26

* Volume increase % of test specimen (50x20x2 mm) after soaked in MMB at 50 °C for 7 days.