# **Benzyl methacrylate**

Other names:	2-Propenoic acid, 2-methyl-, phenylmethyl ester		
	Methacrylic acid benzyl ester		
Inchi:	InChI=1S/C11H12O2/c1-9(2)11(12)13-8-10-6-4-3-5-7-10/h3-7H,1,8H2,2H3		
InchiKey:	AOJOEFVRHOZDFN-UHFFFAOYSA-N		
Formula:	C11H12O2		
SMILES:	C=C(C)C(=O)OCc1ccccc1		
Mol. weight [g/mol]:	176.21		
CAS:	2495-37-6		

## **Physical Properties**

Property code	Value	Unit	Source	
gf	-0.48	kJ/mol	Joback Method	
hf	-163.00	kJ/mol	Joback Method	
hfus	18.48	kJ/mol	Joback Method	
hvap	50.92	kJ/mol	Joback Method	
log10ws	-2.74		Crippen Method	
logp	2.306		Crippen Method	
mcvol	145.230	ml/mol	McGowan Method	
рс	2921.84	kPa	Joback Method	
tb	550.61	К	Joback Method	
tc	768.26	К	Joback Method	
tf	296.59	К	Joback Method	
VC	0.549	m3/kmol	Joback Method	

### **Temperature Dependent Properties**

Property code	Value	Unit	Temperature [K]	Source
cpg	326.73	J/mol×K	550.61	Joback Method
cpg	340.73	J/mol×K	586.89	Joback Method
cpg	353.88	J/mol×K	623.16	Joback Method
cpg	366.21	J/mol×K	659.44	Joback Method
cpg	377.74	J/mol×K	695.71	Joback Method
cpg	388.50	J/mol×K	731.99	Joback Method
cpg	398.52	J/mol×K	768.26	Joback Method

cpl	269.90	J/mol×K	296.60	NIST Webbook	
dvisc	0.0023020	Paxs	298.15	Excess Molar Volumes and Viscosities for Binary Mixtures of Cyclohexanone with Methacrylic Acid, Benzyl Methacrylate, and 2-Hydroxyethyl Methacrylate at (298.15, 308.15, and 318.15) K	
dvisc	0.0018850	Pa×s	308.15	Densities and Viscosities of Binary Mixtures of Propylene Glycol Monomethyl Ether Acetate with Methacrylic Acid, Benzyl Methacrylate, and 2-Hydroxyethyl Methacrylate between 298.15 K and 318.15 K	
dvisc	0.0015800	Paxs	318.15	Densities and Viscosities of Binary Mixtures of Propylene Glycol Monomethyl Ether Acetate with Methacrylic Acid, Benzyl Methacrylate, and 2-Hydroxyethyl Methacrylate between 298.15 K and 318.15 K	
dvisc	0.0023020	Paxs	298.15	Density and Viscosity for Ethyl 3-Ethoxypropionate + Methacrylic Acid, + Benzyl Methacrylate, and + 2-Hydroxyethyl Methacrylate	

dvisc	0.0018850	Paxs	308.15	Density and Viscosity for Ethyl 3-Ethoxypropionate + Methacrylic Acid, + Benzyl Methacrylate, and + 2-Hydroxyethyl Methacrylate	
dvisc	0.0015800	Paxs	318.15	Density and Viscosity for Ethyl 3-Ethoxypropionate + Methacrylic Acid, + Benzyl Methacrylate, and + 2-Hydroxyethyl Methacrylate	
dvisc	0.0023020	Paxs	298.15	Densities and Viscosities of Binary Mixtures of Propylene Glycol Monomethyl Ether Acetate with Methacrylic Acid, Benzyl Methacrylate, and 2-Hydroxyethyl Methacrylate between 298.15 K and 318.15 K	
dvisc	0.0018850	Paxs	308.15	Excess Molar Volumes and Viscosities for Binary Mixtures of Cyclohexanone with Methacrylic Acid, Benzyl Methacrylate, and 2-Hydroxyethyl Methacrylate at (298.15, 308.15, and 318.15) K	
dvisc	0.0015800	Paxs	318.15	Excess Molar Volumes and Viscosities for Binary Mixtures of Cyclohexanone with Methacrylic Acid, Benzyl Methacrylate, and 2-Hydroxyethyl Methacrylate at (298.15, 308.15, and 318.15) K	

dvisc	0.0028710	Paxs	288.15	Densities and Viscosities of Binary Mixtures of 1-Butanol with Methacrylic Acid, Benzyl Methacrylate, and 2-Hydroxyethyl Methacrylate between 288.15 K and 318.15 K	
dvisc	0.0023020	Paxs	298.15	Densities and Viscosities of Binary Mixtures of 1-Butanol with Methacrylic Acid, Benzyl Methacrylate, and 2-Hydroxyethyl Methacrylate between 288.15 K and 318.15 K	
dvisc	0.0018850	Pa×s	308.15	Densities and Viscosities of Binary Mixtures of 1-Butanol with Methacrylic Acid, Benzyl Methacrylate, and 2-Hydroxyethyl Methacrylate between 288.15 K and 318.15 K	
dvisc	0.0015800	Pa×s	318.15	Densities and Viscosities of Binary Mixtures of 1-Butanol with Methacrylic Acid, Benzyl Methacrylate, and 2-Hydroxyethyl Methacrylate between 288.15 K and 318.15 K	
dvisc	0.0023020	Paxs	298.15	Excess Molar Volumes and Viscosities for Binary Mixtures of Propylene Glycol Monomethyl Ether with Methacrylic Acid, Benzyl Methacrylate, and 2-Hydroxyethyl Methacrylate at (298.15, 308.15, and 318.15) K	

dvisc	0.0018850	Paxs	308.15	Excess Molar Volumes and Viscosities for Binary Mixtures of Propylene Glycol Monomethyl Ether with Methacrylic Acid, Benzyl Methacrylate, and 2-Hydroxyethyl Methacrylate at (298.15, 308.15, and 318.15) K	
dvisc	0.0015800	Paxs	318.15	Excess Molar Volumes and Viscosities for Binary Mixtures of Propylene Glycol Monomethyl Ether with Methacrylic Acid, Benzyl Methacrylate, and 2-Hydroxyethyl Methacrylate at (298.15, 308.15, and 318.15) K	
dvisc	0.0023020	Paxs	298.15	Densities and Viscosities for Binary Mixtures of Ethyl Lactate with Methacrylic Acid, Benzyl Methacrylate, and 2-Hydroxyethyl Methacrylate at (298.15, 308.15, and 318.15) K	
dvisc	0.0018850	Pa×s	308.15	Densities and Viscosities for Binary Mixtures of Ethyl Lactate with Methacrylic Acid, Benzyl Methacrylate, and 2-Hydroxyethyl Methacrylate at (298.15, 308.15, and 318.15) K	

#### Sources

**Joback Method:** 

#### **NIST Webbook:**

Density and Viscosity for Ethyl 3-Ethoxypropionate + Methacrylic Acid, Meaning International States Partice Provided States Phanics for the Provide States (Method States) (Me **Density and Viscosity for Ethyl** 

Densities and Viscosities for Binary Mixtures of Ethyl Lactate with Methods of Binary And Viscosities for Binary Mixtures of Guess and Viscosities for Binary Method Viscos

# Legend

https://en.wikipedia.org/wiki/Joback\_method http://webbook.nist.gov/cgi/cbook.cgi?ID=C2495376&Units=SI https://www.doi.org/10.1021/je050223a https://www.doi.org/10.1021/je7004616 https://www.doi.org/10.1021/je060288t https://www.doi.org/10.1021/je050196o https://www.doi.org/10.1021/je0601255 https://www.chemeo.com/doc/models/crippen\_log10ws http://pubs.acs.org/doi/abs/10.1021/ci990307I https://www.doi.org/10.1021/je600568w https://www.doi.org/10.1021/je0502389 http://link.springer.com/article/10.1007/BF02311772

срд:	Ideal gas heat capacity
cpl:	Liquid phase heat capacity
dvisc:	Dynamic viscosity
gf:	Standard Gibbs free energy of formation
hf:	Enthalpy of formation at standard conditions
hfus:	Enthalpy of fusion at standard conditions
hvap:	Enthalpy of vaporization at standard conditions
hvapt:	Enthalpy of vaporization at a given temperature
log10ws:	Log10 of Water solubility in mol/l
logp:	Octanol/Water partition coefficient
mcvol:	McGowan's characteristic volume

- pc: Critical Pressure
- tb: Normal Boiling Point Temperature
- tc: Critical Temperature
- tf: Normal melting (fusion) point
- vc: Critical Volume

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