1-Methoxy-2-propyl acetate

Other names:	1-Methoxy-2-propanol acetate
	1-methoxy-2-acetoxypropane
	2-(1-Methoxy)propyl acetate
	2-Methoxy-1-methylethyl acetate
	2-Propanol, 1-methoxy-, 2-acetate
	2-acetoxy-1-methoxypropane
	2-propanol, 1-methoxy-, acetate
	Acetic acid, 2-methoxy-1-methylethyl ester
	Arcosolv PMA
	Dowanol PMA
	Ektasolve PM Acetate
	NSC 2207
	PGMEA
	Propylene glycol 1-methyl ether 2-acetate
	Propyleneglycol monomethyl ether acetate
	propylene glycol 1-monomethyl ether acetate
Inchi:	InChI=1S/C6H12O3/c1-5(4-8-3)9-6(2)7/h5H,4H2,1-3H3
InchiKey:	LLHKCFNBLRBOGN-UHFFFAOYSA-N
Formula:	C6H12O3
SMILES:	COCC(C)OC(C)=O
Mol. weight [g/mol]:	132.16
CAS:	108-65-6

Physical Properties

Property code	Value	Unit	Source
gf	-341.72	kJ/mol	Joback Method
hf	-549.47	kJ/mol	Joback Method
hfus	11.75	kJ/mol	Joback Method
hvap	40.13	kJ/mol	Joback Method
log10ws	-0.40		Crippen Method
logp	0.584		Crippen Method
mcvol	108.710	ml/mol	McGowan Method
pc	3010.00 ± 20.00	kPa	NIST Webbook
rinpol	857.30		NIST Webbook
rinpol	870.00		NIST Webbook
rinpol	843.00		NIST Webbook
rinpol	914.00		NIST Webbook

ripol	1228.00		NIST Webbook
ripol	1238.30		NIST Webbook
ripol	1228.00		NIST Webbook
tb	418.50 ± 0.50	K	NIST Webbook
tb	419.00	K	Isobaric vapor-liquid equilibria of the binary mixtures propylene glycol methyl ether + propylene glycol methyl ether acetate, methyl acetate + propylene glycol methyl ether and methanol + propylene glycol methyl ether acetate at 101.3 kPa
tb	418.65	K	Solubilities of carbon dioxide in 2-methoxyethyl acetate, 1-methoxy-2-propyl acetate and 3-methoxybutyl acetate
tc	597.90 ± 1.00	K	NIST Webbook
tf	236.77	K	Joback Method
vc	0.407	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	251.15	J/mol×K	525.64	Joback Method
cpg	260.32	J/mol×K	555.87	Joback Method
cpg	269.18	J/mol×K	586.09	Joback Method
cpg	221.96	J/mol×K	434.95	Joback Method
cpg	231.96	J/mol×K	465.18	Joback Method
cpg	241.69	J/mol×K	495.41	Joback Method
cpg	277.74	J/mol×K	616.32	Joback Method
dvisc	0.0010710	Pa×s	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	0.0007770	Pa×s	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	0.0009040	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
pvap	101.33	kPa	418.65	Solubilities of carbon dioxide in 2-methoxyethyl acetate, 1-methoxy-2-propyl acetate and 3-methoxybutyl acetate
pvap	40.01	kPa	389.25	Solubilities of carbon dioxide in 2-methoxyethyl acetate, 1-methoxy-2-propyl acetate and 3-methoxybutyl acetate
pvap	72.49	kPa	407.15	Solubilities of carbon dioxide in 2-methoxyethyl acetate, 1-methoxy-2-propyl acetate and 3-methoxybutyl acetate

pvap	26.70	kPa	377.95	Isobaric vapor liquid equilibria for water + propylene glycol monomethyl ether (PGME), water + propyleneglycol monomethyl ether acetate (PGMEA), and PGME+PGMEA at reduced pressures
pvap	40.00	kPa	389.37	Isobaric vapor liquid equilibria for water + propylene glycol monomethyl ether (PGME), water + propyleneglycol monomethyl ether acetate (PGMEA), and PGME+PGMEA at reduced pressures
pvap	53.30	kPa	398.01	Isobaric vapor liquid equilibria for water + propylene glycol monomethyl ether (PGME), water + propyleneglycol monomethyl ether acetate (PGMEA), and PGME+PGMEA at reduced pressures
pvap	66.70	kPa	405.04	Isobaric vapor liquid equilibria for water + propylene glycol monomethyl ether (PGME), water + propyleneglycol monomethyl ether acetate (PGMEA), and PGME+PGMEA at reduced pressures

pvap	80.00	kPa	411.02	Isobaric vapor liquid equilibria for water + propylene glycol monomethyl ether (PGME), water + propyleneglycol monomethyl ether acetate (PGMEA), and PGME+PGMEA at reduced pressures
pvap	93.30	kPa	416.25	Isobaric vapor liquid equilibria for water + propylene glycol monomethyl ether (PGME), water + propyleneglycol monomethyl ether acetate (PGMEA), and PGME+PGMEA at reduced pressures
pvap	98.70	kPa	418.18	Isobaric vapor liquid equilibria for water + propylene glycol monomethyl ether (PGME), water + propyleneglycol monomethyl ether acetate (PGMEA), and PGME+PGMEA at reduced pressures
pvap	1.62	kPa	318.27	Solubilities of carbon dioxide in 2-methoxyethyl acetate, 1-methoxy-2-propyl acetate and 3-methoxybutyl acetate
pvap	4.15	kPa	335.61	Solubilities of carbon dioxide in 2-methoxyethyl acetate, 1-methoxy-2-propyl acetate and 3-methoxybutyl acetate

pvap	9.25	kPa	352.27	Solubilities of carbon dioxide in 2-methoxyethyl acetate, 1-methoxy-2-propyl acetate and 3-methoxybutyl acetate
pvap	13.71	kPa	361.27	Solubilities of carbon dioxide in 2-methoxyethyl acetate, 1-methoxy-2-propyl acetate and 3-methoxybutyl acetate
pvap	24.44	kPa	375.80	Solubilities of carbon dioxide in 2-methoxyethyl acetate, 1-methoxy-2-propyl acetate and 3-methoxybutyl acetate
rhol	961.52	kg/m3	298.15	Isobaric Vapor Liquid Equilibria for Two Binary Systems {Propylene Glycol Methyl Ether Acetate + Methanol} and {Propylene Glycol Methyl Ether Acetate + N,N-Dimethylformamide} at p = 30.0, 50.0, and 70.0 kPa
rhol	978.20	kg/m3	283.15	Below the room temperature measurements of CO2 solubilities in six physical absorbents
rhol	989.20	kg/m3	273.15	Below the room temperature measurements of CO2 solubilities in six physical absorbents

Sources

Isobaric vapor liquid equilibria for water + propylene glycol monomethyl ether (PGME), water + propyleneglycol monomethyl ether acetate (PGMEA), and PGME+PGMEA at reduced pressures:	https://www.doi.org/10.1016/j.fluid.2007.06.006
Isobaric Vapor Liquid Equilibria for Two Binary Systems {Propylene Glycol Methyl Ether Acetate + Methanol} and {Propylene Glycol Methyl Ether Acetate + N,N-Dimethylformamide} at p = 30.0, 50.0, and 70.0 kPa:	https://www.doi.org/10.1021/acs.jced.6b01071
	http://link.springer.com/article/10.1007/BF02311772

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C108656&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Solubilities of carbon dioxide in 2-methoxyethyl acetate, 1-methoxy-2-propyl acetate and 3-methoxybutyl acetate:	https://www.doi.org/10.1016/j.jct.2014.01.019
Below the room temperature measurements of CO2 solubilities in Six physical absorbents:	https://www.doi.org/10.1016/j.jct.2018.03.009
Solubilities of Three Phosphorus Flame Retardants in Selected Organic Solvents:	https://www.doi.org/10.1021/je501173n
Joback Method:	https://en.wikipedia.org/wiki/Joback_method
Isobaric vapor-liquid equilibria of the binary mixtures propylene glycol methyl ether + propylene glycol methyl ether acetate, methyl acetate + propylene glycol methyl ether and Methacrylic Acid, Benzyl Methacrylate, and 2-Butoxyethyl Acetate at 101.3 kPa between 298.15 K and 318.15 K:	https://www.doi.org/10.1016/j.fluid.2014.01.022
Densities and Viscosities of Binary Mixtures of Propylene Glycol Methyl Ether + Propylene Glycol Methyl Ether Acetate, 1-Methoxy-2-propyl Acetate, 2-Methoxyethyl Acetate, and 2-(2-Ethoxyethoxy)ethyl Acetate:	https://www.doi.org/10.1021/je050196o
Crippen Method	https://www.chemeo.com/doc/models/crippen_log10ws
Solubilities of Sulfuryl Fluoride in 1-Methoxy-2-propyl Acetate, 2-Methoxybutyl Acetate, 2-Methoxyethyl Acetate, and Methyl Methacrylate	https://www.doi.org/10.1021/acs.jced.8b00224

Legend

cpg:	Ideal gas 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
log10ws:	Log10 of Water solubility in mol/l
logp:	Octanol/Water partition coefficient
mcvol:	McGowan's characteristic volume
pc:	Critical Pressure
pvap:	Vapor pressure
rhol:	Liquid Density
rinpol:	Non-polar retention indices
ripol:	Polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

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