

2,3-Dimethoxypropan-1-ol

Other names:	2,3-dimethoxy-1-propanol 2,3-dimethoxypropanol glycerol 1,2-dimethyl ether
Inchi:	InChI=1S/C5H12O3/c1-7-4-5(3-6)8-2/h5-6H,3-4H2,1-2H3
InchiKey:	RXDAPJJFRLSRPX-UHFFFAOYSA-N
Formula:	C5H12O3
SMILES:	COCC(CO)OC
Mol. weight [g/mol]:	120.15
CAS:	40453-77-8

Physical Properties

Property code	Value	Unit	Source
gf	-358.04	kJ/mol	Joback Method
hf	-568.48	kJ/mol	Joback Method
hfus	11.65	kJ/mol	Joback Method
hvap	47.83	kJ/mol	Joback Method
log10ws	0.53		Crippen Method
logp	-0.360		Crippen Method
mcvol	98.920	ml/mol	McGowan Method
pc	3754.57	kPa	Joback Method
rinpol	903.80		NIST Webbook
rinpol	903.80		NIST Webbook
tb	450.38	K	Joback Method
tc	615.86	K	Joback Method
tf	236.39	K	Joback Method
vc	0.364	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	212.77	J/mol×K	450.38	Joback Method
cpg	221.14	J/mol×K	477.96	Joback Method
cpg	229.29	J/mol×K	505.54	Joback Method
cpg	237.24	J/mol×K	533.12	Joback Method

cpg	244.97	J/mol×K	560.70	Joback Method
cpg	252.47	J/mol×K	588.28	Joback Method
cpg	259.75	J/mol×K	615.86	Joback Method
dvisc	0.0441979	Pa×s	236.39	Joback Method
dvisc	0.0094442	Pa×s	272.06	Joback Method
dvisc	0.0028860	Pa×s	307.72	Joback Method
dvisc	0.0011282	Pa×s	343.38	Joback Method
dvisc	0.0005263	Pa×s	379.05	Joback Method
dvisc	0.0002799	Pa×s	414.72	Joback Method
dvisc	0.0001645	Pa×s	450.38	Joback Method
pvap	3.20	kPa	337.95	Isobaric Vapor Liquid Equilibria for the Binary and Ternary Systems of Methanol, Epichlorohydrin, and Glycerol Dimethyl Ether at 101.3 kPa
pvap	7.84	kPa	368.95	Isobaric Vapor Liquid Equilibria for the Binary and Ternary Systems of Methanol, Epichlorohydrin, and Glycerol Dimethyl Ether at 101.3 kPa
pvap	19.27	kPa	398.10	Isobaric Vapor Liquid Equilibria for the Binary and Ternary Systems of Methanol, Epichlorohydrin, and Glycerol Dimethyl Ether at 101.3 kPa
pvap	27.33	kPa	408.55	Isobaric Vapor Liquid Equilibria for the Binary and Ternary Systems of Methanol, Epichlorohydrin, and Glycerol Dimethyl Ether at 101.3 kPa
pvap	32.46	kPa	413.05	Isobaric Vapor Liquid Equilibria for the Binary and Ternary Systems of Methanol, Epichlorohydrin, and Glycerol Dimethyl Ether at 101.3 kPa

pvap	38.80	kPa	419.70	Isobaric Vapor Liquid Equilibria for the Binary and Ternary Systems of Methanol, Epichlorohydrin, and Glycerol Dimethyl Ether at 101.3 kPa
pvap	45.86	kPa	423.55	Isobaric Vapor Liquid Equilibria for the Binary and Ternary Systems of Methanol, Epichlorohydrin, and Glycerol Dimethyl Ether at 101.3 kPa
pvap	59.80	kPa	431.55	Isobaric Vapor Liquid Equilibria for the Binary and Ternary Systems of Methanol, Epichlorohydrin, and Glycerol Dimethyl Ether at 101.3 kPa
pvap	65.60	kPa	433.15	Isobaric Vapor Liquid Equilibria for the Binary and Ternary Systems of Methanol, Epichlorohydrin, and Glycerol Dimethyl Ether at 101.3 kPa
pvap	70.66	kPa	434.85	Isobaric Vapor Liquid Equilibria for the Binary and Ternary Systems of Methanol, Epichlorohydrin, and Glycerol Dimethyl Ether at 101.3 kPa
pvap	76.53	kPa	437.35	Isobaric Vapor Liquid Equilibria for the Binary and Ternary Systems of Methanol, Epichlorohydrin, and Glycerol Dimethyl Ether at 101.3 kPa

pvap	83.33	kPa	439.75	Isobaric Vapor Liquid Equilibria for the Binary and Ternary Systems of Methanol, Epichlorohydrin, and Glycerol Dimethyl Ether at 101.3 kPa
pvap	87.26	kPa	441.65	Isobaric Vapor Liquid Equilibria for the Binary and Ternary Systems of Methanol, Epichlorohydrin, and Glycerol Dimethyl Ether at 101.3 kPa
pvap	95.73	kPa	444.45	Isobaric Vapor Liquid Equilibria for the Binary and Ternary Systems of Methanol, Epichlorohydrin, and Glycerol Dimethyl Ether at 101.3 kPa
pvap	100.79	kPa	446.65	Isobaric Vapor Liquid Equilibria for the Binary and Ternary Systems of Methanol, Epichlorohydrin, and Glycerol Dimethyl Ether at 101.3 kPa

Sources

Isobaric Vapor Liquid Equilibria for the Binary and Ternary Systems of Methanol, Epichlorohydrin, and Glycerol Dimethyl Ether at 101.3 kPa: McGowan Method:

<https://www.doi.org/10.1021/je500606d>

NIST Webbook:

https://en.wikipedia.org/wiki/Joback_method

Crippen Method:

<http://link.springer.com/article/10.1007/BF02311772>

Crippen Method:

<http://webbook.nist.gov/cgi/cbook.cgi?ID=C40453778&Units=SI>

<http://pubs.acs.org/doi/abs/10.1021/ci990307l>

https://www.chemeo.com/doc/models/crippen_log10ws

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
rinpola:	Non-polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

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