

2-Propenoic acid, 2-methyl-, oxiranylmethyl ester

Other names:	1-Propanol, 2,3-epoxy-, methacrylate 2,3-Epoxypropanol methacrylate 2,3-epoxypropyl methacrylate 2-Propenoic acid, 2-methyl-, 2-oxiranylmethyl ester Acryester G Blemmer G Blemmer GMA CP 105 Glycidol methacrylate Glycidyl «alpha»-methacrylate Light Ester G NSC 24156 SR-379 SY-Monomer G glycidyl methacrylate methacrylic acid, 2,3-epoxypropyl ester methacryloxymethyloxirane
Inchi:	InChI=1S/C7H10O3/c1-5(2)7(8)10-4-6-3-9-6/h6H,1,3-4H2,2H3
InchiKey:	VOZRXNHHFUQHIL-UHFFFAOYSA-N
Formula:	C7H10O3
SMILES:	C=C(C)C(=O)OCC1CO1
Mol. weight [g/mol]:	142.15
CAS:	106-91-2

Physical Properties

Property code	Value	Unit	Source
chl	-3728.30 ± 3.00	kJ/mol	NIST Webbook
gf	-171.94	kJ/mol	Joback Method
hf	-394.20 ± 2.70	kJ/mol	NIST Webbook
hfl	-455.40 ± 3.10	kJ/mol	NIST Webbook
hfus	20.20	kJ/mol	Joback Method
hvap	60.62 ± 0.85	kJ/mol	NIST Webbook
hvap	60.60 ± 0.90	kJ/mol	NIST Webbook
hvap	61.20 ± 0.40	kJ/mol	NIST Webbook
hvap	61.21 ± 0.36	kJ/mol	NIST Webbook
log10ws	-0.56		Crippen Method
logp	0.504		Crippen Method

mcvol	107.640	ml/mol	McGowan Method
pc	3560.02	kPa	Joback Method
tb	462.20	K	NIST Webbook
tc	664.52	K	Joback Method
tf	269.60	K	Joback Method
vc	0.411	m ³ /kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	234.86	J/mol×K	466.10	Joback Method
cpg	246.27	J/mol×K	499.17	Joback Method
cpg	257.07	J/mol×K	532.24	Joback Method
cpg	267.27	J/mol×K	565.31	Joback Method
cpg	276.91	J/mol×K	598.38	Joback Method
cpg	286.01	J/mol×K	631.45	Joback Method
cpg	294.59	J/mol×K	664.52	Joback Method

Sources

Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
High pressure phase behavior for binary mixture of 2-ethoxyethyl methacrylate and 2-butoxyethyl methacrylate at 0.1 MPa and 0.2 MPa	https://www.doi.org/10.1016/j.fluid.2012.09.004
Phase Behavior of Binary and Ternary Systems Involving Carbon Dioxide	https://www.doi.org/10.1021/je050453p
Joback Method	https://en.wikipedia.org/wiki/Joback_method
High Pressure:	http://link.springer.com/article/10.1007/BF02311772
McGowan Method:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C106912&Units=SI
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C106912&Units=SI

Legend

chl:	Standard liquid enthalpy of combustion
cpg:	Ideal gas heat capacity
gf:	Standard Gibbs free energy of formation
hf:	Enthalpy of formation at standard conditions
hfl:	Liquid phase 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
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

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