Ethyl 2,3-dichloropropanoate

Other names: Ethyl 2,3-dichloropropionate
Inchi: InChI=1S/C5H8Cl2O2/c1-2-9-5(8)4(7)3-6/h4H,2-3H2,1H3
InchiKey: RNZPQAZETZXKCQ-UHFFFAOYSA-N
Formula: C5H8Cl2O2
SMILES: CCOC(=O)C(Cl)CCl
Mol. weight [g/mol]: 171.02
CAS: 6628-21-3

Physical Properties

Property code	Value	Unit	Source
gf	-269.00	kJ/mol	Joback Method
hf	-428.09	kJ/mol	Joback Method
hfus	16.36	kJ/mol	Joback Method
hvap	44.26	kJ/mol	Joback Method
log10ws	-1.20		Crippen Method
logp	1.396		Crippen Method
mcvol	113.230	ml/mol	McGowan Method
pc	3388.08	kPa	Joback Method
rinpol	994.00		NIST Webbook
rinpol	994.00		NIST Webbook
ripol	1512.00		NIST Webbook
tb	456.65 ± 3.00	K	NIST Webbook
tc	661.42	K	Joback Method
tf	263.11	K	Joback Method
vc	0.431	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	209.55	J/mol×K	464.51	Joback Method
cpg	254.06	J/mol×K	661.42	Joback Method
cpg	247.49	J/mol×K	628.60	Joback Method
cpg	240.59	J/mol×K	595.78	Joback Method
cpg	233.34	J/mol×K	562.97	Joback Method

cpg	225.76	J/mol×K	530.15	Joback Method
cpg	217.82	J/mol×K	497.33	Joback Method
cpl	248.90	J/mol×K	298.00	NIST Webbook
dvisc	0.0003158	Pa×s	464.51	Joback Method
dvisc	0.0004081	Pa×s	430.94	Joback Method
dvisc	0.0005509	Pa×s	397.38	Joback Method
dvisc	0.0007858	Pa×s	363.81	Joback Method
dvisc	0.0012050	Pa×s	330.24	Joback Method
dvisc	0.0020352	Pa×s	296.68	Joback Method
dvisc	0.0039296	Pa×s	263.11	Joback Method

Sources

Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
Joback Method:	https://en.wikipedia.org/wiki/Joback_method
McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C6628213&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l

Legend

cpg:	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
log10ws:	Log10 of Water solubility in mol/l
logp:	Octanol/Water partition coefficient
mcvol:	McGowan's characteristic volume
pc:	Critical Pressure
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