2-Ethoxy-4,4,5,5-tetramethyl-1,3-dioxolane

Inchi: InChI=1S/C9H18O3/c1-6-10-7-11-8(2,3)9(4,5)12-7/h7H,6H2,1-5H3
InchiKey: OIANMOSENHQVOP-UHFFFAOYSA-N
Formula: C9H18O3
SMILES: CCOC1OC(C)(C)C(C)(C)O1
Mol. weight [g/mol]: 174.24
CAS: 2203-73-8

Physical Properties

Property code	Value	Unit	Source
gf	-242.19	kJ/mol	Joback Method
hf	-679.60 ± 9.70	kJ/mol	NIST Webbook
hfl	-727.50 ± 8.40	kJ/mol	NIST Webbook
hfus	19.69	kJ/mol	Joback Method
hvap	47.70 ± 4.20	kJ/mol	NIST Webbook
hvap	47.90	kJ/mol	NIST Webbook
log10ws	-2.07		Crippen Method
logp	1.910		Crippen Method
mcvol	144.420	ml/mol	McGowan Method
pc	2732.56	kPa	Joback Method
tb	488.06	K	Joback Method
tc	693.42	K	Joback Method
tf	316.78	K	Joback Method
vc	0.534	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	349.52	J/mol×K	488.06	Joback Method
cpg	366.31	J/mol×K	522.29	Joback Method
cpg	382.01	J/mol×K	556.51	Joback Method
cpg	396.77	J/mol×K	590.74	Joback Method
cpg	410.73	J/mol×K	624.97	Joback Method
cpg	424.04	J/mol×K	659.19	Joback Method
cpg	436.84	J/mol×K	693.42	Joback Method

Sources

McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C2203738&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
Joback Method:	https://en.wikipedia.org/wiki/Joback_method

Legend

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