2,2-Diisopropyl-1,3-dioxolane

Other names: 1,3-Dioxolane, 2,2-bis(1-methylethyl)-
Inchi: InChI=1S/C9H18O2/c1-7(2)9(8(3)4)10-5-6-11-9/h7-8H,5-6H2,1-4H3
InchiKey: BIYJJEWTEPSHGZ-UHFFFAOYSA-N
Formula: C9H18O2
SMILES: CC(C)C1(C(C)C)OCCO1
Mol. weight [g/mol]: 158.24
CAS: 4421-10-7

Physical Properties

Property code	Value	Unit	Source
gf	-121.16	kJ/mol	Joback Method
hf	-427.93	kJ/mol	Joback Method
hfus	15.62	kJ/mol	Joback Method
hvap	42.98	kJ/mol	Joback Method
log10ws	-1.78		Crippen Method
logp	2.042		Crippen Method
mcvol	138.550	ml/mol	McGowan Method
pc	2893.62	kPa	Joback Method
tb	473.86	K	Joback Method
tc	682.15	K	Joback Method
tf	249.13	K	Joback Method
vc	0.508	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	322.15	J/mol×K	473.86	Joback Method
cpg	339.64	J/mol×K	508.58	Joback Method
cpg	355.99	J/mol×K	543.29	Joback Method
cpg	371.31	J/mol×K	578.01	Joback Method
cpg	385.71	J/mol×K	612.72	Joback Method
cpg	399.28	J/mol×K	647.44	Joback Method
cpg	412.13	J/mol×K	682.15	Joback Method
hvapt	49.90 ± 0.30	kJ/mol	298.00	NIST Webbook

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=C4421107&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l

Legend

cpg:	Ideal gas heat capacity
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
hvapt:	Enthalpy of vaporization at a given temperature
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