1,3-Dioxolane, 2-(1-methylpropyl)-

Other names: 1,3-Dioxolane, 2-sec-butyl-
Inchi: InChI=1S/C7H14O2/c1-3-6(2)7-8-4-5-9-7/h6-7H,3-5H2,1-2H3
InchiKey: FRBNVSJPLIGZIP-UHFFFAOYSA-N
Formula: C7H14O2
SMILES: CCC(C)C1OCCO1
Mol. weight [g/mol]: 130.18
CAS: 14447-25-7

Physical Properties

Property code	Value	Unit	Source
gf	-130.07	kJ/mol	Joback Method
hf	-396.61	kJ/mol	Joback Method
hfus	20.26	kJ/mol	Joback Method
hvap	40.06	kJ/mol	Joback Method
log10ws	-1.19		Crippen Method
logp	1.405		Crippen Method
mcvol	110.370	ml/mol	McGowan Method
pc	3380.21	kPa	Joback Method
rinpol	904.00		NIST Webbook
rinpol	908.00		NIST Webbook
rinpol	901.00		NIST Webbook
tb	428.30	K	Joback Method
tc	628.03	K	Joback Method
tf	217.69	K	Joback Method
vc	0.405	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	234.85	J/mol×K	428.30	Joback Method
cpg	302.13	J/mol×K	594.74	Joback Method
cpg	290.05	J/mol×K	561.46	Joback Method
cpg	277.31	J/mol×K	528.17	Joback Method
cpg	263.87	J/mol×K	494.88	Joback Method

cpg	249.72	J/mol×K	461.59	Joback Method
cpg	313.56	J/mol×K	628.03	Joback Method
dvisc	0.0003974	Pa×s	428.30	Joback Method
dvisc	0.0005289	Pa×s	393.20	Joback Method
dvisc	0.0007446	Pa×s	358.10	Joback Method
dvisc	0.0011292	Pa×s	323.00	Joback Method
dvisc	0.0018954	Pa×s	287.89	Joback Method
dvisc	0.0036737	Pa×s	252.79	Joback Method
dvisc	0.0088142	Pa×s	217.69	Joback Method

Sources

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=C14447257&Units=SI
Crippen Method: http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method: 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
rinpol: Non-polar retention indices
tb: Normal Boiling Point Temperature
tc: Critical Temperature
tf: Normal melting (fusion) point
vc: Critical Volume