1,3-Dioxolane, 4-methyl-2-(2-methylpropyl), trans

Other names: 1,3-Dioxolane, 4-methyl-2-(2-methylpropyl), cis
2-isobutyl-4-methyl-1,3-dioxolane
Inchi: InChI=1S/C8H16O2/c1-6(2)4-8-9-5-7(3)10-8/h6-8H,4-5H2,1-3H3
InchiKey: PDVLTWPJDBXATJ-UHFFFAOYSA-N
Formula: C8H16O2
SMILES: CC(C)CC1OCC(C)O1
Mol. weight [g/mol]: 144.21
CAS: 18433-93-7

Physical Properties

Property code	Value	Unit	Source
gf	-129.36	kJ/mol	Joback Method
hf	-437.59	kJ/mol	Joback Method
hfus	23.92	kJ/mol	Joback Method
hvap	41.98	kJ/mol	Joback Method
log10ws	-1.72		Crippen Method
logp	1.794		Crippen Method
mcvol	124.460	ml/mol	McGowan Method
pc	2925.00	kPa	Joback Method
rinpol	934.00		NIST Webbook
rinpol	932.00		NIST Webbook
rinpol	926.00		NIST Webbook
rinpol	939.80		NIST Webbook
rinpol	928.00		NIST Webbook
rinpol	941.00		NIST Webbook
rinpol	937.00		NIST Webbook
tb	446.51	K	Joback Method
tc	643.69	K	Joback Method
tf	224.72	K	Joback Method
vc	0.460	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source

cpg	277.45	J/mol×K	446.51	Joback Method
cpg	293.68	J/mol×K	479.37	Joback Method
cpg	309.16	J/mol×K	512.24	Joback Method
cpg	323.91	J/mol×K	545.10	Joback Method
cpg	337.94	J/mol×K	577.96	Joback Method
cpg	351.27	J/mol×K	610.82	Joback Method
cpg	363.92	J/mol×K	643.69	Joback Method
dvisc	0.0056311	Pa×s	224.72	Joback Method
dvisc	0.0026179	Pa×s	261.69	Joback Method
dvisc	0.0014712	Pa×s	298.65	Joback Method
dvisc	0.0009386	Pa×s	335.62	Joback Method
dvisc	0.0006547	Pa×s	372.58	Joback Method
dvisc	0.0004874	Pa×s	409.54	Joback Method
dvisc	0.0003810	Pa×s	446.51	Joback Method

Sources

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C18433937&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
McGowan Method: http://link.springer.com/article/10.1007/BF02311772

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