1,3-Dioxolane, 2-butyl-

Other names: 2-Butyl-1,3-dioxolane
Inchi: InChI=1S/C7H14O2/c1-2-3-4-7-8-5-6-9-7/h7H,2-6H2,1H3
InchiKey: KODJTPVSRWYRDF-UHFFFAOYSA-N
Formula: C7H14O2
SMILES: CCCCC1OCCO1
Mol. weight [g/mol]: 130.18
CAS: 4360-76-3

Physical Properties

Property code	Value	Unit	Source
gf	-127.63	kJ/mol	Joback Method
hf	-391.33	kJ/mol	Joback Method
hfus	23.78	kJ/mol	Joback Method
hvap	40.45	kJ/mol	Joback Method
log10ws	-1.43		Crippen Method
logp	1.550		Crippen Method
mcvol	110.370	ml/mol	McGowan Method
pc	3348.98	kPa	Joback Method
rinpol	942.00		NIST Webbook
rinpol	938.00		NIST Webbook
rinpol	936.00		NIST Webbook
rinpol	969.00		NIST Webbook
rinpol	987.00		NIST Webbook
rinpol	969.00		NIST Webbook
tb	428.00 ± 2.00	K	NIST Webbook
tc	623.82	K	Joback Method
tf	232.69	K	Joback Method
vc	0.410	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	234.82	J/mol×K	428.74	Joback Method
cpg	300.32	J/mol×K	591.31	Joback Method

cpg	288.52	J/mol×K	558.80	Joback Method
cpg	276.09	J/mol×K	526.28	Joback Method
cpg	263.01	J/mol×K	493.77	Joback Method
cpg	249.26	J/mol×K	461.25	Joback Method
cpg	311.50	J/mol×K	623.82	Joback Method
dvisc	0.0004146	Pa×s	428.74	Joback Method
dvisc	0.0005360	Pa×s	396.07	Joback Method
dvisc	0.0007256	Pa×s	363.39	Joback Method
dvisc	0.0010429	Pa×s	330.72	Joback Method
dvisc	0.0016231	Pa×s	298.04	Joback Method
dvisc	0.0028166	Pa×s	265.37	Joback Method
dvisc	0.0057061	Pa×s	232.69	Joback Method

Sources

McGowan Method: http://link.springer.com/article/10.1007/BF02311772
NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C4360763&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
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