

2,3-Butanediol, (R,S)

Inchi: InChI=1S/C4H10O2/c1-3(5)4(2)6/h3-6H,1-2H3/t3-,4+
InchiKey: OWBTYPJTUOEWEK-ZXZARUISSA-N
Formula: C4H10O2
SMILES: CC(O)C(C)O
Mol. weight [g/mol]: 90.12

Physical Properties

Property code	Value	Unit	Source
gf	-295.72	kJ/mol	Joback Method
hf	-440.91	kJ/mol	Joback Method
hfus	7.25	kJ/mol	Joback Method
hvap	57.08	kJ/mol	Joback Method
log10ws	-0.25		Crippen Method
logp	-0.252		Crippen Method
mcvol	78.960	ml/mol	McGowan Method
pc	5087.49	kPa	Joback Method
rinpol	784.00		NIST Webbook
tb	474.40	K	Joback Method
tc	639.26	K	Joback Method
tf	226.48	K	Joback Method
vc	0.285	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	173.55	J/mol×K	474.40	Joback Method
cpg	180.37	J/mol×K	501.88	Joback Method
cpg	186.92	J/mol×K	529.35	Joback Method
cpg	193.21	J/mol×K	556.83	Joback Method
cpg	199.24	J/mol×K	584.30	Joback Method
cpg	205.02	J/mol×K	611.78	Joback Method
cpg	210.57	J/mol×K	639.26	Joback Method
dvisc	1.9625358	Pa×s	226.48	Joback Method
dvisc	0.1120965	Pa×s	267.80	Joback Method

dvisc	0.0137635	Pa×s	309.12	Joback Method
dvisc	0.0027712	Pa×s	350.44	Joback Method
dvisc	0.0007824	Pa×s	391.76	Joback Method
dvisc	0.0002812	Pa×s	433.08	Joback Method
dvisc	0.0001208	Pa×s	474.40	Joback Method

Sources

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
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=R635093&Units=SI

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

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