L-(-)-Arabitol, pentamethyl ether

Other names: 1,2,3,4,5-Penta-O-methyl-l-arabinitol
Inchi: InChI=1S/C10H22O5/c1-11-6-8(13-3)10(15-5)9(14-4)7-12-2/h8-10H,6-7H2,1-5H3
InchiKey: UKACKIRJWDAFEZ-UHFFFAOYSA-N
Formula: C10H22O5
SMILES: COCC(OC)C(OC)C(COC)OC
Mol. weight [g/mol]: 222.28

Physical Properties

Property code	Value	Unit	Source
gf	-499.00	kJ/mol	Joback Method
hf	-926.67	kJ/mol	Joback Method
hfus	17.03	kJ/mol	Joback Method
hvap	48.74	kJ/mol	Joback Method
log10ws	0.22		Crippen Method
logp	0.324		Crippen Method
mcvol	181.110	ml/mol	McGowan Method
pc	1994.77	kPa	Joback Method
rinpol	1304.00		NIST Webbook
rinpol	1314.40		NIST Webbook
rinpol	1314.00		NIST Webbook
rinpol	1314.40		NIST Webbook
tb	538.98	K	Joback Method
tc	710.38	K	Joback Method
tf	268.61	K	Joback Method
vc	0.667	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	450.67	J/mol×K	538.98	Joback Method
cpg	465.79	J/mol×K	567.55	Joback Method
cpg	480.49	J/mol×K	596.11	Joback Method
cpg	494.75	J/mol×K	624.68	Joback Method
cpg	508.52	J/mol×K	653.24	Joback Method

cpg	521.81	J/mol×K	681.81	Joback Method
cpg	534.57	J/mol×K	710.38	Joback Method
dvisc	0.0030159	Pa×s	268.61	Joback Method
dvisc	0.0010482	Pa×s	313.67	Joback Method
dvisc	0.0004751	Pa×s	358.73	Joback Method
dvisc	0.0002570	Pa×s	403.80	Joback Method
dvisc	0.0001572	Pa×s	448.86	Joback Method
dvisc	0.0001052	Pa×s	493.92	Joback Method
dvisc	0.0000753	Pa×s	538.98	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=U332842&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