

Propane, 1,1-dipropoxy-

Other names:	Propionaldehyde, dipropyl acetal
Inchi:	InChI=1S/C9H20O2/c1-4-7-10-9(6-3)11-8-5-2/h9H,4-8H2,1-3H3
InchiKey:	QIDYONASNONTLI-UHFFFAOYSA-N
Formula:	C9H20O2
SMILES:	CCCOC(CC)OCCC
Mol. weight [g/mol]:	160.25
CAS:	4744-11-0

Physical Properties

Property code	Value	Unit	Source
gf	-187.54	kJ/mol	Joback Method
hf	-498.81	kJ/mol	Joback Method
hfus	17.92	kJ/mol	Joback Method
hvap	40.06	kJ/mol	Joback Method
log10ws	-2.37		Crippen Method
logp	2.576		Crippen Method
mcvol	149.410	ml/mol	McGowan Method
pc	2250.40	kPa	Joback Method
tb	449.72	K	Joback Method
tc	616.59	K	Joback Method
tf	220.65	K	Joback Method
vc	0.570	m ³ /kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	324.83	J/molxK	449.72	Joback Method
cpg	338.74	J/molxK	477.53	Joback Method
cpg	352.24	J/molxK	505.34	Joback Method
cpg	365.32	J/molxK	533.15	Joback Method
cpg	377.99	J/molxK	560.97	Joback Method
cpg	390.23	J/molxK	588.78	Joback Method
cpg	402.06	J/molxK	616.59	Joback Method
dvisc	0.0048122	Paxs	220.65	Joback Method

dvisc	0.0018379	Paxs	258.83	Joback Method
dvisc	0.0008990	Paxs	297.01	Joback Method
dvisc	0.0005175	Paxs	335.19	Joback Method
dvisc	0.0003336	Paxs	373.36	Joback Method
dvisc	0.0002332	Paxs	411.54	Joback Method
dvisc	0.0001733	Paxs	449.72	Joback Method

Sources

Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci9903071
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=C4744110&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
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

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