Propane, 2,2-diethoxy-

Other names:	Acetone, diethyl acetal
	Acetone diethyl ketal
	2,2-Diethoxypropane
	USAF do-44
Inchi:	InChI=1S/C7H16O2/c1-5-8-7(3,4)9-6-2/h5-6H2,1-4H3
InchiKey:	FGQLGYBGTRHODR-UHFFFAOYSA-N
Formula:	C7H16O2
SMILES:	CCOC(C)(C)OCC
Mol. weight [g/mol]:	132.20
CAS:	126-84-1

Physical Properties

Property code	Value	Unit	Source
gf	-199.10	kJ/mol	Joback Method
hf	-506.70	kJ/mol	NIST Webbook
hfl	-538.50 ± 1.00	kJ/mol	NIST Webbook
hfus	8.85	kJ/mol	Joback Method
hvap	43.20 ± 0.40	kJ/mol	NIST Webbook
hvap	43.90	kJ/mol	NIST Webbook
hvap	31.80	kJ/mol	NIST Webbook
log10ws	-1.53		Crippen Method
logp	1.796		Crippen Method
mcvol	121.230	ml/mol	McGowan Method
pc	2755.56	kPa	Joback Method
rinpol	761.00		NIST Webbook
rinpol	723.00		NIST Webbook
rinpol	731.00		NIST Webbook
rinpol	754.00		NIST Webbook
rinpol	723.00		NIST Webbook
tb	386.00	K	NIST Webbook
tc	576.64	K	Joback Method
tf	207.90 ± 0.60	K	NIST Webbook
vc	0.453	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	243.99	J/mol×K	401.17	Joback Method
cpg	256.60	J/mol×K	430.42	Joback Method
cpg	268.75	J/mol×K	459.66	Joback Method
cpg	280.46	J/mol×K	488.91	Joback Method
cpg	291.74	J/mol×K	518.15	Joback Method
cpg	302.58	J/mol×K	547.40	Joback Method
cpg	312.99	J/mol×K	576.64	Joback Method
dvisc	0.0049459	Pa×s	215.53	Joback Method
dvisc	0.0021202	Pa×s	246.47	Joback Method
dvisc	0.0010979	Pa×s	277.41	Joback Method
dvisc	0.0006488	Pa×s	308.35	Joback Method
dvisc	0.0004220	Pa×s	339.29	Joback Method
dvisc	0.0002950	Pa×s	370.23	Joback Method
dvisc	0.0002179	Pa×s	401.17	Joback Method

Pressure Dependent Properties

Property code	Value	Unit	Pressure [kPa]	Source
tbrp	318.20	K	8.00	NIST Webbook

Sources

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C126841&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
hfl:	Liquid phase 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
tbrp:	Boiling point at reduced pressure
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume