

Propane, 1,1'-[ethylidenebis(oxy)]bis-

Other names:	Acetaldehyde, dipropyl acetal 1,1-Dipropoxyethane Acetaldehyde di-n-propyl acetal Dipropyl acetal n-Propyl acetal Ethane, 1,1-dipropoxy
Inchi:	InChI=1S/C8H18O2/c1-4-6-9-8(3)10-7-5-2/h8H,4-7H2,1-3H3
InchiKey:	MISTZQJSHHTDCF-UHFFFAOYSA-N
Formula:	C8H18O2
SMILES:	CCCOC(C)OCCC
Mol. weight [g/mol]:	146.23
CAS:	105-82-8

Physical Properties

Property code	Value	Unit	Source
gf	-195.96	kJ/mol	Joback Method
hf	-478.17	kJ/mol	Joback Method
hfus	15.33	kJ/mol	Joback Method
hvap	37.83	kJ/mol	Joback Method
log10ws	-1.95		Crippen Method
logp	2.186		Crippen Method
mcvol	135.320	ml/mol	McGowan Method
pc	2470.27	kPa	Joback Method
rinpol	863.00		NIST Webbook
rinpol	856.00		NIST Webbook
tb	417.00 ± 4.00	K	NIST Webbook
tb	367.85 ± 0.50	K	NIST Webbook
tc	594.62	K	Joback Method
tf	209.38	K	Joback Method
vc	0.513	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
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cpg	282.43	J/molxK	426.84	Joback Method
cpg	295.24	J/molxK	454.80	Joback Method
cpg	307.70	J/molxK	482.77	Joback Method
cpg	319.80	J/molxK	510.73	Joback Method
cpg	331.54	J/molxK	538.70	Joback Method
cpg	342.91	J/molxK	566.66	Joback Method
cpg	353.90	J/molxK	594.62	Joback Method
dvisc	0.0048555	Paxs	209.38	Joback Method
dvisc	0.0018809	Paxs	245.62	Joback Method
dvisc	0.0009298	Paxs	281.87	Joback Method
dvisc	0.0005397	Paxs	318.11	Joback Method
dvisc	0.0003502	Paxs	354.35	Joback Method
dvisc	0.0002462	Paxs	390.60	Joback Method
dvisc	0.0001837	Paxs	426.84	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=C105828&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci9903071
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

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