1,2-Dipropoxyethane

Inchi: InChI=1S/C8H18O2/c1-3-5-9-7-8-10-6-4-2/h3-8H2,1-2H3
InchiKey: HQSLKNLISLWZQH-UHFFFAOYSA-N
Formula: C8H18O2
SMILES: CCCOCCOCCC
Mol. weight [g/mol]: 146.23
CAS: 18854-56-3

Physical Properties

Property code	Value	Unit	Source
gf	-193.52	kJ/mol	Joback Method
hf	-472.89	kJ/mol	Joback Method
hfus	18.85	kJ/mol	Joback Method
hvap	50.60 ± 0.10	kJ/mol	NIST Webbook
hvap	50.62 ± 0.14	kJ/mol	NIST Webbook
log10ws	-1.35		Crippen Method
logp	1.840		Crippen Method
mcvol	135.320	ml/mol	McGowan Method
pc	2450.74	kPa	Joback Method
tb	435.00 ± 8.00	K	NIST Webbook
tb	436.35 ± 0.70	K	NIST Webbook
tc	591.50	K	Joback Method
tf	224.38	K	Joback Method
vc	0.519	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	352.10	J/mol×K	591.50	Joback Method
cpg	341.34	J/mol×K	564.13	Joback Method
cpg	330.24	J/mol×K	536.76	Joback Method
cpg	318.79	J/mol×K	509.39	Joback Method
cpg	307.00	J/mol×K	482.02	Joback Method
cpg	294.87	J/mol×K	454.65	Joback Method
cpg	282.41	J/mol×K	427.28	Joback Method

cpl	309.00	J/mol×K	298.15	NIST Webbook
dvisc	0.0002493	Pa×s	393.46	Joback Method
dvisc	0.0003408	Pa×s	359.65	Joback Method
dvisc	0.0004971	Pa×s	325.83	Joback Method
dvisc	0.0007912	Pa×s	292.01	Joback Method
dvisc	0.0014226	Pa×s	258.20	Joback Method
dvisc	0.0030523	Pa×s	224.38	Joback Method
dvisc	0.0001917	Pa×s	427.28	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.02766e+01
Coeff. B	-2.51920e+03
Coeff. C	-3.37920e+01
Temperature range (K), min.	285.99
Temperature range (K), max.	541.17

Sources

The Yaws Handbook of Vapor Pressure: https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure
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=C18854563&Units=SI

Legend

cpg: Ideal gas heat capacity
cpl: Liquid phase 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
pvap:	Vapor pressure
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

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