Vinyl ether

Other names:	1,1'-OXYBIS-ETHENE
	1,1'-Oxybisethene
	CH2=CHOCH=CH2
	Divinyl ether
	Divinyl oxide
	Ethene, 1,1'-oxybis-
	Ethenyloxyethene
	Ether, divinyl
	VINESTHENE
	VINETHER
	Vinesthesin
	Vinethen
	Vinethene
	Vinidyl
	Vinydan
Inchi:	InChI=1S/C4H6O/c1-3-5-4-2/h3-4H,1-2H2
InchiKey:	QYKIQEUNHZKYBP-UHFFFAOYSA-N
Formula:	C4H6O
SMILES:	C=COC=C
Mol. weight [g/mol]:	70.09
CAS:	109-93-3

Physical Properties

Property code	Value	Unit	Source
chg	-2418.90 ± 0.79	kJ/mol	NIST Webbook
gf	53.48	kJ/mol	Joback Method
hf	-12.70 ± 0.84	kJ/mol	NIST Webbook
hfpi	824.00	kJ/mol	NIST Webbook
hfus	4.74	kJ/mol	Joback Method
hvap	6.26	kJ/mol	NIST Webbook
ie	8.68 ± 0.05	eV	NIST Webbook
log10ws	-1.28		Crippen Method
logp	1.290		Crippen Method
mcvol	64.490	ml/mol	McGowan Method
nfpaf	%!d(float64=3)		KDB
nfpah	%!d(float64=2)		KDB
nfpas	%!d(float64=2)		KDB

pc	4244.08	kPa	Joback Method
rinpol	480.00		NIST Webbook
tb	301.20	K	NIST Webbook
tc	477.23	K	Joback Method
tf	172.05 ± 0.30	K	NIST Webbook
tf	173.15 ± 1.00	K	NIST Webbook
vc	0.239	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	93.21	J/mol×K	306.70	Joback Method
cpg	98.98	J/mol×K	335.12	Joback Method
cpg	104.57	J/mol×K	363.54	Joback Method
cpg	109.99	J/mol×K	391.97	Joback Method
cpg	115.22	J/mol×K	420.39	Joback Method
cpg	120.28	J/mol×K	448.81	Joback Method
cpg	125.17	J/mol×K	477.23	Joback Method
dvisc	0.0008174	Pa×s	179.08	Joback Method
dvisc	0.0015351	Pa×s	153.55	Joback Method
dvisc	0.0005094	Pa×s	204.60	Joback Method
dvisc	0.0003526	Pa×s	230.12	Joback Method
dvisc	0.0002626	Pa×s	255.65	Joback Method
dvisc	0.0002064	Pa×s	281.17	Joback Method
dvisc	0.0001688	Pa×s	306.70	Joback Method
hvapt	29.20	kJ/mol	288.00	NIST Webbook
hvapt	26.10	kJ/mol	288.00	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.45518e+01
Coeff. B	-2.64600e+03
Coeff. C	-3.48270e+01
Temperature range (K), min.	220.33
Temperature range (K), max.	321.52

Sources

McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C109933&Units=SI
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
KDB:	https://www.cheric.org/files/research/kdb/mol/mol999.mol

Legend

chg:	Standard gas enthalpy of combustion
cpg:	Ideal gas heat capacity
dvisc:	Dynamic viscosity
gf:	Standard Gibbs free energy of formation
hf:	Enthalpy of formation at standard conditions
hfpi:	Enthalpy of formation of positive ion at standard conditions
hfus:	Enthalpy of fusion at standard conditions
hvap:	Enthalpy of vaporization at standard conditions
hvapt:	Enthalpy of vaporization at a given temperature
ie:	Ionization energy
log10ws:	Log10 of Water solubility in mol/l
logp:	Octanol/Water partition coefficient
mcvol:	McGowan's characteristic volume
nfpaf:	NFPA Fire Rating
nfpah:	NFPA Health Rating
nfpas:	NFPA Safety Rating
pc:	Critical Pressure
pvap:	Vapor 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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