

Decane, 1-(ethenyloxy)-

Other names:	1-(Vinylloxy)decane Decyl vinyl ether Ether, decyl vinyl
Inchi:	InChI=1S/C12H24O/c1-3-5-6-7-8-9-10-11-12-13-4-2/h4H,2-3,5-12H2,1H3
InchiKey:	NSOQRMLVFRWIT-UHFFFAOYSA-N
Formula:	C12H24O
SMILES:	C=COCCCCCCCCC
Mol. weight [g/mol]:	184.32
CAS:	765-05-9

Physical Properties

Property code	Value	Unit	Source
gf	33.00	kJ/mol	Joback Method
hf	-297.80	kJ/mol	Joback Method
hfus	26.74	kJ/mol	Joback Method
hvap	44.05	kJ/mol	Joback Method
log10ws	-4.28		Crippen Method
logp	4.287		Crippen Method
mcvol	181.510	ml/mol	McGowan Method
pc	1818.50	kPa	Joback Method
tb	497.80 ± 2.00	K	NIST Webbook
tc	656.89	K	Joback Method
tf	245.47	K	Joback Method
vc	0.707	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	417.23	J/mol×K	493.06	Joback Method
cpg	491.34	J/mol×K	629.58	Joback Method
cpg	477.65	J/mol×K	602.28	Joback Method
cpg	463.40	J/mol×K	574.97	Joback Method
cpg	448.59	J/mol×K	547.67	Joback Method
cpg	433.21	J/mol×K	520.36	Joback Method

cpg	504.50	J/molxK	656.89	Joback Method
dvisc	0.0001795	Paxs	493.06	Joback Method
dvisc	0.0002368	Paxs	451.79	Joback Method
dvisc	0.0003304	Paxs	410.53	Joback Method
dvisc	0.0004967	Paxs	369.26	Joback Method
dvisc	0.0008273	Paxs	328.00	Joback Method
dvisc	0.0015957	Paxs	286.74	Joback Method
dvisc	0.0038387	Paxs	245.47	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
Coeff. A	1.44089e+01
Coeff. B	-4.15428e+03
Coeff. C	-7.71340e+01
Temperature range (K), min.	371.32
Temperature range (K), max.	533.78

Sources

McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C765059&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/ci9903071
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
Joback Method:	https://en.wikipedia.org/wiki/Joback_method

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
pvap:	Vapor pressure
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

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