trans-2-Dodecen-1-ol

Other names: (E)-2-Dodecenol
(E)2-Dodecen-1-ol
2-Dodecen-1-ol, (2E)-
pentyl 2-Methyl butyrate
trans-Dodec-2-enol
Inchi: InChI=1S/C12H24O/c1-2-3-4-5-6-7-8-9-10-11-12-13/h10-11,13H,2-9,12H2,1H3/b11-10+
InchiKey: MLRYPOCSLBIUHY-ZHACJKMWSA-N
Formula: C12H24O
SMILES: CCCCCCCCCC=CCO
Mol. weight [g/mol]: 184.32
CAS: 69064-37-5

Physical Properties

Property code	Value	Unit	Source
gf	-6.44	kJ/mol	Joback Method
hf	-326.02	kJ/mol	Joback Method
hfus	31.13	kJ/mol	Joback Method
hvap	91.00	kJ/mol	NIST Webbook
log10ws	-3.96		Crippen Method
logp	3.676		Crippen Method
mcvol	181.510	ml/mol	McGowan Method
pc	2018.13	kPa	Joback Method
rinpol	1473.00		NIST Webbook
rinpol	1483.00		NIST Webbook
rinpol	1483.00		NIST Webbook
rinpol	1483.00		NIST Webbook
rinpol	1457.00		NIST Webbook
rinpol	1472.50		NIST Webbook
rinpol	1472.50		NIST Webbook
ripol	2029.00		NIST Webbook
ripol	2041.00		NIST Webbook
ripol	2044.00		NIST Webbook
ripol	2041.00		NIST Webbook
ripol	2036.00		NIST Webbook
ripol	2040.00		NIST Webbook
ripol	2041.00		NIST Webbook
tb	570.30	K	Joback Method

tc	733.56	K	Joback Method
tf	280.74	K	Joback Method
vc	0.707	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	459.51	J/mol×K	570.30	Joback Method
cpg	473.74	J/mol×K	597.51	Joback Method
cpg	487.37	J/mol×K	624.72	Joback Method
cpg	500.43	J/mol×K	651.93	Joback Method
cpg	512.93	J/mol×K	679.14	Joback Method
cpg	524.90	J/mol×K	706.35	Joback Method
cpg	536.36	J/mol×K	733.56	Joback Method
dvisc	0.0209597	Pa×s	280.74	Joback Method
dvisc	0.0040712	Pa×s	329.00	Joback Method
dvisc	0.0012026	Pa×s	377.26	Joback Method
dvisc	0.0004685	Pa×s	425.52	Joback Method
dvisc	0.0002211	Pa×s	473.78	Joback Method
dvisc	0.0001199	Pa×s	522.04	Joback Method
dvisc	0.0000721	Pa×s	570.30	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.44974e+01
Coeff. B	-4.60063e+03
Coeff. C	-9.07560e+01
Temperature range (K), min.	414.52
Temperature range (K), max.	591.59

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C69064375&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
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
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
rinpol:	Non-polar retention indices
ripol:	Polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume