

5-Dodecanol

Other names:	dodecan-5-ol
Inchi:	InChI=1S/C12H26O/c1-3-5-7-8-9-11-12(13)10-6-4-2/h12-13H,3-11H2,1-2H3
InchiKey:	AVERNHDYEFYHIV-UHFFFAOYSA-N
Formula:	C12H26O
SMILES:	CCCCCCCC(O)CCCC
Mol. weight [g/mol]:	186.33
CAS:	10203-33-5

Physical Properties

Property code	Value	Unit	Source
gf	-89.10	kJ/mol	Joback Method
hf	-448.52	kJ/mol	Joback Method
hfus	27.40	kJ/mol	Joback Method
hvap	58.60	kJ/mol	Joback Method
log10ws	-4.22		Crippen Method
logp	3.898		Crippen Method
mcvol	185.810	ml/mol	McGowan Method
pc	1940.65	kPa	Joback Method
rinpol	1474.00		NIST Webbook
rinpol	1474.00		NIST Webbook
ripol	1772.00		NIST Webbook
tb	565.70	K	Joback Method
tc	725.92	K	Joback Method
tf	270.82	K	Joback Method
vc	0.721	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	559.62	J/molxK	725.92	Joback Method
cpg	478.70	J/molxK	565.70	Joback Method
cpg	493.60	J/molxK	592.40	Joback Method
cpg	507.92	J/molxK	619.11	Joback Method
cpg	521.66	J/molxK	645.81	Joback Method

cpg	534.85	J/mol×K	672.51	Joback Method
cpg	547.50	J/mol×K	699.22	Joback Method
dvisc	0.0000810	Paxs	565.70	Joback Method
dvisc	0.0381702	Paxs	270.82	Joback Method
dvisc	0.0062239	Paxs	319.97	Joback Method
dvisc	0.0016449	Paxs	369.11	Joback Method
dvisc	0.0005944	Paxs	418.26	Joback Method
dvisc	0.0002660	Paxs	467.41	Joback Method
dvisc	0.0001387	Paxs	516.55	Joback Method
hvapt	79.40	kJ/mol	318.00	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
Coeff. A	1.58487e+01
Coeff. B	-4.92640e+03
Coeff. C	-8.53350e+01
Temperature range (K), min.	401.92
Temperature range (K), max.	552.86

Sources

McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C10203335&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
h vap:	Enthalpy of vaporization at standard conditions
hvapt:	Enthalpy of vaporization at a given temperature
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

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