1-Dodecanamine, N-dodecyl-

Other names: Alamine 204
Di-n-dodecylamine
Didodecylamine
Dilaurylamine
Inchi: InChI=1S/C24H51N/c1-3-5-7-9-11-13-15-17-19-21-23-25-24-22-20-18-16-14-12-10-8-6-4
InchiKey: MJCJUDJQDGGKOX-UHFFFAOYSA-N
Formula: C24H51N
SMILES: CCCCCCCCCCCCNCCCCCCCCCCCC
Mol. weight [g/mol]: 353.67
CAS: 3007-31-6

Physical Properties

Property code	Value	Unit	Source
gf	240.59	kJ/mol	Joback Method
hf	-485.22	kJ/mol	Joback Method
hfus	63.01	kJ/mol	Joback Method
hvap	75.45	kJ/mol	Joback Method
log10ws	-9.06		Crippen Method
logp	8.418		Crippen Method
mcvol	359.000	ml/mol	McGowan Method
pc	812.14	kPa	Joback Method
rinpol	2543.00		NIST Webbook
tb	798.69	K	Joback Method
tc	977.92	K	Joback Method
tf	328.65 ± 8.00	K	NIST Webbook
tf	331.15 ± 8.00	K	NIST Webbook
tf	317.55 ± 3.00	K	NIST Webbook
tf	331.15 ± 6.00	K	NIST Webbook
tf	331.15 ± 8.00	K	NIST Webbook
tf	328.65 ± 8.00	K	NIST Webbook
tf	326.15 ± 6.00	K	NIST Webbook
tf	325.15 ± 6.00	K	NIST Webbook
tf	320.05 ± 5.00	K	NIST Webbook
tf	320.10 ± 0.50	K	NIST Webbook
tf	328.65 ± 2.00	K	NIST Webbook
vc	1.415	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	1161.29	J/mol×K	798.69	Joback Method
cpg	1184.02	J/mol×K	828.56	Joback Method
cpg	1205.64	J/mol×K	858.43	Joback Method
cpg	1226.20	J/mol×K	888.30	Joback Method
cpg	1245.73	J/mol×K	918.18	Joback Method
cpg	1264.30	J/mol×K	948.05	Joback Method
cpg	1281.93	J/mol×K	977.92	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.54625e+01
Coeff. B	-5.97587e+03
Coeff. C	-1.29120e+02
Temperature range (K), min.	522.92
Temperature range (K), max.	717.82

Sources

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=C3007316&Units=SI

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

Legend

cpg:	Ideal gas heat capacity
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
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

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