1-Octanamine, n-octyl-

Other names:	Di-n-octylamine
	Dioctylamine
	N-n-Octyl-n-octylamine
	Rc 5632
	di-Normal-octylamine
Inchi:	InChI=1S/C16H35N/c1-3-5-7-9-11-13-15-17-16-14-12-10-8-6-4-2/h17H,3-16H2,1-2H3
InchiKey:	LAWOZCWGWDVVSG-UHFFFAOYSA-N
Formula:	C16H35N
SMILES:	CCCCCCCCNCCCCCCCC
Mol. weight [g/mol]:	241.46
CAS:	1120-48-5

Physical Properties

Property code	Value	Unit	Source
chl	-10890.90 ± 1.60	kJ/mol	NIST Webbook
gf	173.23	kJ/mol	Joback Method
hf	-320.20 ± 2.30	kJ/mol	NIST Webbook
hfl	-407.30 ± 1.90	kJ/mol	NIST Webbook
hfus	42.29	kJ/mol	Joback Method
hvap	87.10	kJ/mol	NIST Webbook
hvap	87.10 ± 1.30	kJ/mol	NIST Webbook
hvap	87.10 ± 1.30	kJ/mol	NIST Webbook
log10ws	-5.71		Crippen Method
logp	5.297		Crippen Method
mcvol	246.280	ml/mol	McGowan Method
pc	1260.00 ± 300.00	kPa	NIST Webbook
rhoc	220.93 ± 20.04	kg/m3	NIST Webbook
tb	570.65 ± 7.00	K	NIST Webbook
tb	570.70	K	NIST Webbook
tc	734.00 ± 3.00	K	NIST Webbook
tf	296.65 ± 1.40	K	NIST Webbook
tf	283.45 ± 2.00	K	NIST Webbook
tf	287.75 ± 0.50	K	NIST Webbook
tf	309.65 ± 5.00	K	NIST Webbook
tf	309.15 ± 5.00	K	NIST Webbook
tf	287.65 ± 2.00	K	NIST Webbook
tf	308.15 ± 5.00	K	NIST Webbook

tf	307.15 ± 5.00	K	NIST Webbook
tf	287.77 ± 0.30	K	NIST Webbook
vc	0.967	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	677.16	J/mol×K	615.65	Joback Method
cpg	696.09	J/mol×K	642.74	Joback Method
cpg	714.25	J/mol×K	669.83	Joback Method
cpg	731.65	J/mol×K	696.91	Joback Method
cpg	748.31	J/mol×K	724.00	Joback Method
cpg	764.27	J/mol×K	751.09	Joback Method
cpg	779.55	J/mol×K	778.18	Joback Method
cpl	507.20	J/mol×K	298.15	NIST Webbook
hvapt	92.60	kJ/mol	298.15	The vaporization enthalpy and vapor pressure of S (+)-methamphetamine at T = 298.15 K by correlation gas chromatography

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.66287e+01
Coeff. B	-5.62189e+03
Coeff. C	-1.02615e+02
Temperature range (K), min.	446.65
Temperature range (K), max.	599.37

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C1120485&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
The vaporization enthalpy and vapor pressure of S (+)-methamphetamine at T = 298.15 K by correlation gas chromatography:	https://www.doi.org/10.1016/j.jct.2013.08.005
Joback Method:	https://en.wikipedia.org/wiki/Joback_method
McGowan Method:	http://link.springer.com/article/10.1007/BF02311772

Legend

chl:	Standard liquid enthalpy of combustion
cpg:	Ideal gas heat capacity
cpl:	Liquid phase heat capacity
gf:	Standard Gibbs free energy of formation
hf:	Enthalpy of formation at standard conditions
hfl:	Liquid phase enthalpy of formation 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
log10ws:	Log10 of Water solubility in mol/l
logp:	Octanol/Water partition coefficient
mcvol:	McGowan's characteristic volume
pc:	Critical Pressure
pvap:	Vapor pressure
rhoc:	Critical density
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume