1-Octadecanamine

Other names:	1-Aminooctadecane
	1-Octadecylamine
	Adogenen 142
	Alamine 7
	Alamine 7D
	Amine 18-90
	Amine AB
	Armeen 1180
	Armeen 118d
	Armeen 18
	Armeen 18D
	Armid HTD
	Armofilm
	Crodamine 1.18D
	Farmin 80
	Kemamine P 990
	Monooctadecylamine
	NSC 9857
	Nissan amine AB
	Noram SH
	Octadecylamine
	Octadecylamineadogenen 142
	Oda
	Oktadecylamin
	Stearamine
	Stearylamine
	n-Octadecylamine
	n-Stearylamine
Inchi:	InChI=1S/C18H39N/c1-2-3-4-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19/h2-19H2,1H3
InchiKey:	REYJJPSVUYRZGE-UHFFFAOYSA-N
Formula:	C18H39N
SMILES:	CCCCCCCCCCCCCCCCCCN
Mol. weight [g/mol]:	269.51
CAS:	124-30-1

Physical Properties

Property code	Value	Unit	Source

gf	167.13	kJ/mol	Joback Method
hf	-381.06	kJ/mol	Joback Method
hfus	47.57	kJ/mol	Joback Method
hvap	66.30	kJ/mol	Joback Method
log10ws	-6.79		Crippen Method
logp	6.207		Crippen Method
mcvol	274.460	ml/mol	McGowan Method
pc	1198.13	kPa	Joback Method
rinpol	2048.00		NIST Webbook
rinpol	2043.00		NIST Webbook
rinpol	2043.00		NIST Webbook
rinpol	2047.00		NIST Webbook
ripol	2330.00		NIST Webbook
ripol	2330.00		NIST Webbook
tb	622.00	K	NIST Webbook
tc	852.87	K	Joback Method
tf	328.15 ± 1.00	K	NIST Webbook
tf	320.15 ± 3.00	K	NIST Webbook
tf	325.65 ± 0.50	K	NIST Webbook
tf	326.21 ± 0.50	K	NIST Webbook
tf	326.17 ± 0.50	K	NIST Webbook
tf	325.53 ± 0.30	K	NIST Webbook
tf	326.01 ± 0.50	K	NIST Webbook
tf	325.15 ± 1.00	K	NIST Webbook
tf	325.35 ± 0.60	K	NIST Webbook
tf	324.95 ± 0.50	K	NIST Webbook
tf	332.50 ± 2.00	K	NIST Webbook
tf	326.17 ± 0.50	K	NIST Webbook
vc	1.073	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	808.63	J/mol×K	683.77	Joback Method
cpg	828.20	J/mol×K	711.95	Joback Method
cpg	846.91	J/mol×K	740.14	Joback Method
cpg	864.79	J/mol×K	768.32	Joback Method
cpg	881.87	J/mol×K	796.50	Joback Method
cpg	898.17	J/mol×K	824.69	Joback Method
cpg	913.72	J/mol×K	852.87	Joback Method

hvapt	76.20	kJ/mol	542.50	NIST Webbook

Pressure Dependent Properties

Property code	Value	Unit	Pressure [kPa]	Source
tbrp	505.20	K	4.30	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.64041e+01
Coeff. B	-5.95971e+03
Coeff. C	-1.16332e+02
Temperature range (K), min.	486.12
Temperature range (K), max.	653.60

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=C124301&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
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
tbrp:	Boiling point at reduced pressure
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume