

2-Octanamine

Other names:	1-Amino-1-methyl heptane 1-Methylheptylamine 2-Aminooctane 2-Octylamine Heptylamine, 1-methyl- sec-Octylamine
Inchi:	InChI=1S/C8H19N/c1-3-4-5-6-7-8(2)9/h8H,3-7,9H2,1-2H3
InchiKey:	HBXNJMZWGSKPW-UHFFFAOYSA-N
Formula:	C8H19N
SMILES:	CCCCCCC(C)N
Mol. weight [g/mol]:	129.24
CAS:	693-16-3

Physical Properties

Property code	Value	Unit	Source
gf	80.49	kJ/mol	Joback Method
hf	-179.94	kJ/mol	Joback Method
hfus	18.15	kJ/mol	Joback Method
hvap	43.66	kJ/mol	Joback Method
log10ws	-2.72		Crippen Method
logp	2.304		Crippen Method
mcvol	133.560	ml/mol	McGowan Method
pc	2709.85	kPa	Joback Method
tb	438.15 ± 3.00	K	NIST Webbook
tb	438.20	K	NIST Webbook
tc	635.72	K	Joback Method
tf	248.18	K	Joback Method
vc	0.506	m ³ /kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	292.68	J/mol×K	454.53	Joback Method
cpg	306.70	J/mol×K	484.73	Joback Method

cpg	320.12	J/mol×K	514.93	Joback Method
cpg	332.98	J/mol×K	545.13	Joback Method
cpg	345.29	J/mol×K	575.33	Joback Method
cpg	357.05	J/mol×K	605.52	Joback Method
cpg	368.30	J/mol×K	635.72	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
Coeff. A	1.56650e+01
Coeff. B	-4.14520e+03
Coeff. C	-6.29560e+01
Temperature range (K), min.	332.52
Temperature range (K), max.	463.32

Datasets

Mass density, kg/m³

Temperature, K - Liquid	Pressure, kPa - Liquid	Mass density, kg/m ³ - Liquid
293.15	100.00	772.0
293.15	10000.00	778.7
293.15	20000.00	784.8
293.15	30000.00	790.6
293.15	40000.00	796.1
293.15	50000.00	801.2
293.15	60000.00	806.0
293.15	70000.00	810.6
293.15	80000.00	815.0
293.15	90000.00	819.1
293.15	100000.00	823.2
293.15	110000.00	826.9
293.15	120000.00	830.6
293.15	130000.00	834.2

293.15	140000.00	837.6
303.15	100.00	764.0
303.15	10000.00	771.3
303.15	20000.00	777.8
303.15	30000.00	783.8
303.15	40000.00	789.2
303.15	50000.00	794.5
303.15	60000.00	799.5
303.15	70000.00	804.2
303.15	80000.00	808.7
303.15	90000.00	813.0
303.15	100000.00	817.1
303.15	110000.00	821.0
303.15	120000.00	824.8
303.15	130000.00	828.5
303.15	140000.00	832.0
313.15	100.00	755.8
313.15	10000.00	763.5
313.15	20000.00	770.4
313.15	30000.00	776.7
313.15	40000.00	782.5
313.15	50000.00	788.1
313.15	60000.00	793.2
313.15	70000.00	798.1
313.15	80000.00	802.7
313.15	90000.00	807.1
313.15	100000.00	811.4
313.15	110000.00	815.5
313.15	120000.00	819.4
313.15	130000.00	823.1
313.15	140000.00	826.7
323.15	100.00	748.1
323.15	10000.00	756.0
323.15	20000.00	763.2
323.15	30000.00	769.9
323.15	40000.00	776.0
323.15	50000.00	781.6
323.15	60000.00	787.1
323.15	70000.00	792.2
323.15	80000.00	797.0
323.15	90000.00	801.5
323.15	100000.00	805.9
323.15	110000.00	810.1
323.15	120000.00	814.1

323.15	130000.00	818.0
323.15	140000.00	821.6
333.15	100.00	739.6
333.15	10000.00	748.1
333.15	20000.00	755.5
333.15	30000.00	762.6
333.15	40000.00	769.0
333.15	50000.00	775.0
333.15	60000.00	780.6
333.15	70000.00	785.8
333.15	80000.00	790.9
333.15	90000.00	795.5
333.15	100000.00	800.0
333.15	110000.00	804.4
333.15	120000.00	808.5
333.15	130000.00	812.5
333.15	140000.00	816.3
343.15	100.00	731.5
343.15	10000.00	740.5
343.15	20000.00	748.6
343.15	30000.00	756.0
343.15	40000.00	762.7
343.15	50000.00	768.9
343.15	60000.00	774.7
343.15	70000.00	780.2
343.15	80000.00	785.3
343.15	90000.00	790.2
343.15	100000.00	794.9
343.15	110000.00	799.2
343.15	120000.00	803.4
343.15	130000.00	807.5
343.15	140000.00	811.4
353.15	100.00	723.2
353.15	10000.00	733.0
353.15	20000.00	741.6
353.15	30000.00	749.3
353.15	40000.00	756.2
353.15	50000.00	762.7
353.15	60000.00	768.7
353.15	70000.00	774.4
353.15	80000.00	779.7
353.15	90000.00	784.7
353.15	100000.00	789.5
353.15	110000.00	794.1

353.15	120000.00	798.4
353.15	130000.00	802.3
353.15	140000.00	806.3
363.15	100.00	714.7
363.15	10000.00	724.9
363.15	20000.00	734.0
363.15	30000.00	742.0
363.15	40000.00	749.3
363.15	50000.00	756.1
363.15	60000.00	762.4
363.15	70000.00	768.3
363.15	80000.00	773.8
363.15	90000.00	779.0
363.15	100000.00	783.9
363.15	110000.00	788.5
363.15	120000.00	793.0
363.15	130000.00	797.3
363.15	140000.00	801.4
373.15	100.00	706.0
373.15	10000.00	717.2
373.15	20000.00	726.6
373.15	30000.00	735.2
373.15	40000.00	742.9
373.15	50000.00	749.9
373.15	60000.00	756.8
373.15	70000.00	762.8
373.15	80000.00	768.5
373.15	90000.00	773.8
373.15	100000.00	778.9
373.15	110000.00	783.7
373.15	120000.00	788.3
373.15	130000.00	792.8
373.15	140000.00	796.8
383.15	100.00	697.6
383.15	10000.00	709.4
383.15	20000.00	719.5
383.15	30000.00	728.5
383.15	40000.00	736.4
383.15	50000.00	743.8
383.15	60000.00	750.6
383.15	70000.00	756.8
383.15	80000.00	762.7
383.15	90000.00	768.1
383.15	100000.00	773.3

383.15	110000.00	778.3
383.15	120000.00	783.0
383.15	130000.00	787.5
383.15	140000.00	791.8
393.15	100.00	689.0
393.15	10000.00	701.6
393.15	20000.00	712.3
393.15	30000.00	721.7
393.15	40000.00	730.0
393.15	50000.00	737.9
393.15	60000.00	744.9
393.15	70000.00	751.4
393.15	80000.00	757.5
393.15	90000.00	763.2
393.15	100000.00	768.6
393.15	110000.00	773.6
393.15	120000.00	778.4
393.15	130000.00	782.8
393.15	140000.00	787.2
403.15	100.00	680.1
403.15	10000.00	693.5
403.15	20000.00	705.0
403.15	30000.00	714.8
403.15	40000.00	723.5
403.15	50000.00	731.5
403.15	60000.00	738.7
403.15	70000.00	745.4
403.15	80000.00	751.6
403.15	90000.00	757.5
403.15	100000.00	763.1
403.15	110000.00	768.3
403.15	120000.00	773.2
403.15	130000.00	777.9
403.15	140000.00	782.4

Reference

<https://www.doi.org/10.1021/je800786k>

Sources

Joback Method:

https://en.wikipedia.org/wiki/Joback_method

McGowan Method:

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The Yaws Handbook of Vapor

Pressure:

Crippen Method:

Crippen Method:

<https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure>

<http://pubs.acs.org/doi/abs/10.1021/ci9903071>

https://www.chemeo.com/doc/models/crippen_log10ws

Volumetric Properties of 2-Alkylamines (2-Aminobutane and 2-Aminooctane) at Pressures up to 140 MPa and Temperatures between (293.15 and 403.15) K:

<https://www.doi.org/10.1021/je800786k>

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
rhol:	Liquid Density
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

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