

Octanamide, N,N-dibutyl-

Other names:	N,N-dibutyloctanamide
Inchi:	InChI=1S/C16H33NO/c1-4-7-10-11-12-13-16(18)17(14-8-5-2)15-9-6-3/h4-15H2,1-3H3
InchiKey:	IRACWGPKEYDUZEC-UHFFFAOYSA-N
Formula:	C16H33NO
SMILES:	CCCCCCCC(=O)N(CCCC)CCCC
Mol. weight [g/mol]:	255.44
CAS:	57303-23-8

Physical Properties

Property code	Value	Unit	Source
gf	65.70	kJ/mol	Joback Method
hf	-418.62	kJ/mol	Joback Method
hfus	75.58	kJ/mol	Enthalpies of vaporization of N,N-dialkyl monamides at 298.15K
hvap	75.60 ± 0.70	kJ/mol	NIST Webbook
log10ws	-4.87		Crippen Method
logp	4.776		Crippen Method
mcvol	247.850	ml/mol	McGowan Method
pc	1378.88	kPa	Joback Method
rinpol	1839.00		NIST Webbook
tb	631.79	K	Joback Method
tc	798.03	K	Joback Method
tf	352.48	K	Joback Method
vc	0.956	m ³ /kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	685.29	J/mol×K	631.79	Joback Method
cpg	703.72	J/mol×K	659.50	Joback Method
cpg	721.33	J/mol×K	687.20	Joback Method
cpg	738.15	J/mol×K	714.91	Joback Method
cpg	754.21	J/mol×K	742.62	Joback Method

cpg	769.54	J/mol×K	770.33	Joback Method
cpg	784.16	J/mol×K	798.03	Joback Method

Sources

Enthalpies of vaporization of
N,N-dialkyl monamides at 298.15K:
Joback Method:

<https://www.doi.org/10.1016/j.tca.2009.05.007>

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=C57303238&Units=SI>

Crippen Method:

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

Crippen Method:

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

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
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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