Dimantine

Other names:	(Hydrochloride salt) dimantine 1-Octadecanamine, N,N-dimethyl- ADMA 18 Adogen 342D Armeen DM 18D Armine DM18D Barlene 18S DM 18D Dimanthine Dimethyl stearamine Dimethyl-1-octadecanamine Dimethyl-n-octadecylamine Dimethyloctadecylamine Dimethylstearylamine Dymanthine Farmin DM 80 Kemamine 9902D Kemamine T-9902 N,N-Dimethyl-1-octadecanamine N,N-Dimethyl-n-octadecylamine N,N-Dimethyloctadecylamine N,N-Dimethyloktadecylamin N,N-Dimethylstearylamine N,N-dimethyl octadecanamine N-Octadecyl-N,N-dimethylamine N-Stearyl-N,N-dimethylamine Octadecylamine, N,N-dimethyl- Octadecyldimethylamine Onamine 18 Stearyldimethylamine
Inchi:	InChI=1S/C20H43N/c1-4-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-20-21(2)3/h4-20H2,1
InchiKey:	NAPSCFZYZVSQHF-UHFFFAOYSA-N
Formula:	C20H43N
SMILES:	CCCCCCCCCCCCCCCCCCN(C)C
Mol. weight [g/mol]:	297.56
CAS:	124-28-7

Physical Properties

Property code	Value	Unit	Source
gf	228.30	kJ/mol	Joback Method
hf	-388.60	kJ/mol	Joback Method
hfus	50.58	kJ/mol	Joback Method
hvap	62.16	kJ/mol	Joback Method
log10ws	-6.76		Crippen Method
logp	6.809		Crippen Method
mcvol	302.640	ml/mol	McGowan Method
pc	1014.24	kPa	Joback Method
rinpol	2096.00		NIST Webbook
rinpol	2096.00		NIST Webbook
tb	669.44	K	Joback Method
tc	830.16	K	Joback Method
tf	296.04 ± 0.20	K	NIST Webbook
tf	296.04 ± 0.20	K	NIST Webbook
tf	301.00 ± 1.50	K	NIST Webbook
tf	298.15 ± 1.00	K	NIST Webbook
vc	1.173	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	883.36	J/mol×K	669.44	Joback Method
cpg	904.53	J/mol×K	696.23	Joback Method
cpg	924.80	J/mol×K	723.01	Joback Method
cpg	944.20	J/mol×K	749.80	Joback Method
cpg	962.77	J/mol×K	776.58	Joback Method
cpg	980.54	J/mol×K	803.37	Joback Method
cpg	997.52	J/mol×K	830.16	Joback Method
hvapt	74.70	kJ/mol	602.50	NIST Webbook

Correlations

Information	Value

Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.72220e+01
Coeff. B	-6.25332e+03
Coeff. C	-1.16054e+02
Temperature range (K), min.	485.32
Temperature range (K), max.	641.08

Sources

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=C124287&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

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

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