1-Dodecanamine, N,N-dimethyl-

Other names: 1-Dimethylaminododecane
1-Dodecaneamine, N,N-dimethyl
Adma 12
Adma 2
Antioxidant DDA
Armeen DM 12D
Barlene 125
Barlene 12S
DDA
DDA (Antioxidant)
DDA (Corrosion inhibitor)
Dimethyl Lauramine
Dimethyl-n-dodecylamine
Dimethyldodecylamine
Dodecanamine, N,N-dimethyl
Dodecylamine, N,N-dimethyl-
Dodecyldimethylamine
Empigen AB
Farmin DM 20
Farmin DM 2098
Genamin LA 302D
Kemamine T-6902
Lauryldimethylamine
Monolauryl dimethylamine
N,N-Dimethyl-1-aminododecane
N,N-Dimethyl-1-dodecanamine
N,N-Dimethyl-n-dodecylamine
N,N-Dimethyldodecanamine
N,N-Dimethyldodecylamine
N,N-Dimethyllaurylamine
N,N-dimethyl-1-dodecamine
N-Dodecyl-N,N-dimethylamine
NSC 7332
Onamine 12
RC 5629
n-Dodecyldimethylamine
n-Lauryldimethylamine

Inchi: InChI=1S/C14H31N/c1-4-5-6-7-8-9-10-11-12-13-14-15(2)3/h4-14H2,1-3H3

InchiKey: YWFWDNVOPHGWMX-UHFFFAOYSA-N

Formula: C14H31N

SMILES: CCCCCCCCCCCCN(C)C
Mol. weight [g/mol]: 213.40
CAS: 112-18-5

Physical Properties

Property code	Value	Unit	Source
gf	177.78	kJ/mol	Joback Method
hf	-264.76	kJ/mol	Joback Method
hfus	35.04	kJ/mol	Joback Method
hvap	48.80	kJ/mol	Joback Method
log10ws	-4.25		Crippen Method
logp	4.469		Crippen Method
mcvol	218.100	ml/mol	McGowan Method
pc	1521.12	kPa	Joback Method
rinpol	1529.00		NIST Webbook
rinpol	1509.00		NIST Webbook
rinpol	1496.00		NIST Webbook
tb	532.16	K	Joback Method
tc	690.75	K	Joback Method
tf	252.85 ± 0.50	K	NIST Webbook
vc	0.838	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	543.46	J/mol×K	532.16	Joback Method
cpg	562.02	J/mol×K	558.59	Joback Method
cpg	579.85	J/mol×K	585.02	Joback Method
cpg	596.96	J/mol×K	611.45	Joback Method
cpg	613.37	J/mol×K	637.89	Joback Method
cpg	629.11	J/mol×K	664.32	Joback Method
cpg	644.21	J/mol×K	690.75	Joback Method
hvapt	69.50	kJ/mol	303.50	NIST Webbook
hvapt	64.40	kJ/mol	492.00	NIST Webbook

Pressure Dependent Properties

Property code	Value	Unit	Pressure [kPa]	Source
tbrp	384.20	K	0.40	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.74980e+01
Coeff. B	-5.59159e+03
Coeff. C	-9.24240e+01
Temperature range (K), min.	417.32
Temperature range (K), max.	551.26

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=C112185&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
tbrp:	Boiling point at reduced pressure
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume