Dextroamphetamine

Other names:

(+)-(S)-Amphetamine
(+)-Amphetamine
(+)-«alpha»-Methylphenethylamine
(+)-«alpha»-Methylphenylethylamine
(+)-Â«alphaÂ»-Methylphenethylamine
(+)-Â«alphaÂ»-Methylphenylethylamine
(2S)-(+)-Amphetamine
(S)-(+)-Amphetamine
(S)-(+)-«beta»-Phenylisopropylamine
(S)-(+)-Â«betaÂ»-Phenylisopropylamine
(S)-1-Phenyl-2-aminopropane
(S)-1-Phenyl-2-propylamine
(S)-1-phenylpropan-2-amine
(S)-Amphetamine
(S)-«alpha»-Phenylethylamine
(S)-Â«alphaÂ»-Phenylethylamine
Amphetamine, (d)
Amsustain
Benzeneethanamine, «alpha»-methyl-, (S)-
Benzeneethanamine, Â«alphaÂ»-methyl-, (S)-
D-(S)-amphetamine
D-1-Phenyl-2-aminopropan
D-1-Phenyl-2-aminopropane
D-2-Amino-1-phenylpropane
D-AM
D-amphetamine
D-«alpha»-methylphenethylamine
D-Â«alphaÂ»-methylphenethylamine
Dephadren
Dexacaps
Dexadrine
Dexamfetamine
Dexamphetamine
Dexidrine
NSC-73713
Phenethylamine, D-«alpha»-methyl-
Phenethylamine, D-Â«alphaÂ»-methyl-
Phenethylamine, «alpha»-methyl-, (+)-
Phenethylamine, «alpha»-methyl-, d-
Phenethylamine, Â«alphaÂ»-methyl-, (+)-

	Phenethylamine, Â«alphaÂ»-methyl-, d-
	«alpha»-Methylphenethylamine, d-form
	Â«alphaÂ»-Methylphenethylamine, d-form
Inchi:	InChI=1S/C9H13N/c1-8(10)7-9-5-3-2-4-6-9/h2-6,8H,7,10H2,1H3/t8-/m0/s1
InchiKey:	KWTSXDURSIMDCE-QMMMGPOBSA-N
Formula:	C9H13N
SMILES:	CC(N)Cc1ccccc1
Mol. weight [g/mol]:	135.21
CAS:	51-64-9

Physical Properties

Property code	Value	Unit	Source
gf	201.32	kJ/mol	Joback Method
hf	35.95	kJ/mol	Joback Method
hfus	14.78	kJ/mol	Joback Method
hvap	48.16	kJ/mol	Joback Method
log10ws	-2.24		Crippen Method
logp	1.576		Crippen Method
mcvol	123.890	ml/mol	McGowan Method
pc	3517.91	kPa	Joback Method
rinpol	1148.00		NIST Webbook
rinpol	1122.00		NIST Webbook
rinpol	1117.00		NIST Webbook
rinpol	1117.00		NIST Webbook
rinpol	1111.00		NIST Webbook
rinpol	1118.00		NIST Webbook
rinpol	1116.00		NIST Webbook
rinpol	1116.00		NIST Webbook
rinpol	1121.00		NIST Webbook
rinpol	1144.00		NIST Webbook
rinpol	1120.00		NIST Webbook
rinpol	1122.00		NIST Webbook
rinpol	1123.00		NIST Webbook
rinpol	1141.00		NIST Webbook
rinpol	1116.00		NIST Webbook
rinpol	1110.00		NIST Webbook
rinpol	1141.00		NIST Webbook
rinpol	1116.00		NIST Webbook
rinpol	1122.00		NIST Webbook
rinpol	1141.00		NIST Webbook

rinpol	1138.00		NIST Webbook
rinpol	1120.00		NIST Webbook
rinpol	1135.00		NIST Webbook
rinpol	1121.00		NIST Webbook
rinpol	1155.00		NIST Webbook
rinpol	1119.00		NIST Webbook
rinpol	1124.00		NIST Webbook
rinpol	1116.00		NIST Webbook
ripol	1656.00		NIST Webbook
ripol	1648.00		NIST Webbook
ripol	1665.00		NIST Webbook
tb	504.09	K	Joback Method
tc	728.62	K	Joback Method
tf	285.87	K	Joback Method
vc	0.455	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	271.70	J/mol×K	504.09	Joback Method
cpg	286.20	J/mol×K	541.51	Joback Method
cpg	299.78	J/mol×K	578.93	Joback Method
cpg	312.48	J/mol×K	616.35	Joback Method
cpg	324.34	J/mol×K	653.78	Joback Method
cpg	335.40	J/mol×K	691.20	Joback Method
cpg	345.71	J/mol×K	728.62	Joback Method
hvapt	58.20	kJ/mol	298.15	The Vaporization Enthalpy and Vapor Pressure of (d)-Amphetamine and of Several Primary Amines Used as Standards at T/K = 298 As Evaluated by Correlation Gas Chromatography and Transpiration

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.41863e+01
Coeff. B	-3.90777e+03
Coeff. C	-7.36590e+01
Temperature range (K), min.	354.82
Temperature range (K), max.	513.98

Sources

Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
The Vaporization Enthalpy and Vapor Pressure of (d)-Amphetamine and of several Primary Amines Used as Standards at T/K = 298 As Evaluated by Correlation Gas Chromatography and Transpiration:	https://www.doi.org/10.1021/je400212t
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=C51649&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
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume