1,2-Ethanediamine, N,N'-bis(2-aminoethyl)-

Other names: 1,2-Ethanediamine, N1,N2-bis(2-aminoethyl)-
1,4,7,10-Tetraazadecane
1,8-Diamino-3,6-Diazaoctane
3,6-Diazaoctane-1,8-diamine
3,6-Diazaoctanethylenediamin
Araldite HY 951
Araldite Hardener HY 951
DEH 24
Ethanediamine, N,N'-bis(2-aminoethyl)-
Ethylenediamine, N,N'-bis(2-aminoethyl)-
HY 951
N,N'-Bis(2-Aminoethyl)-1,2-ethanediamine
N,N'-Bis(2-aminoethyl)-1,2-diaminoethane
N,N'-Bis(2-aminoethyl)ethylenediamine
NSC 443
TECZA
TETA
Trien
Trientene
Trientine
Triethylene tetramine
Triethylenetetramine

Inchi: InChI=1S/C6H18N4/c7-1-3-9-5-6-10-4-2-8/h9-10H,1-8H2

InchiKey: VILCJCGEZXAXTO-UHFFFAOYSA-N

Formula: C6H18N4

SMILES: NCCNCCNCCN

Mol. weight [g/mol]: 146.23

CAS: 112-24-3

Physical Properties

Property code	Value	Unit	Source
gf	311.32	kJ/mol	Joback Method
hf	7.35	kJ/mol	Joback Method
hfus	31.89	kJ/mol	Joback Method
hvap	71.00 ± 2.60	kJ/mol	NIST Webbook
hvap	84.70 ± 0.30	kJ/mol	NIST Webbook

hvap	75.60	kJ/mol	NIST Webbook
log10ws	0.42		Crippen Method
logp	-1.917		Crippen Method
mcvol	135.320	ml/mol	McGowan Method
pc	3655.35	kPa	Joback Method
tb	550.55	K	NIST Webbook
tb	539.70	K	NIST Webbook
tc	777.74	K	Joback Method
tf	238.15	K	NIST Webbook
vc	0.499	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	393.41	J/mol×K	679.91	Joback Method
cpg	403.93	J/mol×K	712.52	Joback Method
cpg	413.88	J/mol×K	745.13	Joback Method
cpg	358.25	J/mol×K	582.08	Joback Method
cpg	370.59	J/mol×K	614.69	Joback Method
cpg	382.31	J/mol×K	647.30	Joback Method
cpg	423.29	J/mol×K	777.74	Joback Method
cpl	376.00	J/mol×K	333.00	NIST Webbook
hvapt	84.70	kJ/mol	298.15	Vapour pressure and enthalpy of vaporization of aliphatic poly-amines
hvapt	59.80	kJ/mol	490.50	NIST Webbook

Pressure Dependent Properties

Property code	Value	Unit	Pressure [kPa]	Source
tbrp	430.20	K	2.70	NIST Webbook

Correlations

Information	Value

Property code	pvap
Equation	ln(Pvp) = A + B/T + C*ln(T) + D*T^2
Coeff. A	1.97802e+02
Coeff. B	-1.85814e+04
Coeff. C	-2.56573e+01
Coeff. D	9.35273e-06
Temperature range (K), min.	285.15
Temperature range (K), max.	718.00

Sources

Vapour pressure and enthalpy of vaporization of aliphatic poly-amines:	https://www.doi.org/10.1016/j.jct.2009.09.003
Excess molar enthalpies for binary mixtures of different amines with water:	https://www.doi.org/10.1016/j.jct.2015.04.030
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=C112243&Units=SI
KDB Vapor Pressure Data:	https://www.cheric.org/research/kdb/hcprop/showprop.php?cmpid=1330
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws

Legend

cpg:	Ideal gas heat capacity
cpl:	Liquid phase 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
tb:	Normal Boiling Point Temperature
tbrp:	Boiling point at reduced pressure
tc:	Critical Temperature
tf:	Normal melting (fusion) point

vc: Critical Volume

Latest version available from:
https://www.chemeo.com/cid/69-788-2/1-2-Ethanediamine-N-N-bis-2-aminoethyl.pdf
Generated by Cheméo on 2024-04-26 19:04:24.499886126 +0000 UTC m=+16447513.420463442.
Cheméo (https://www.chemeo.com) is the biggest free database of chemical and physical data for the process industry.