4-Decylaniline

Other names:	4-n-Decylaniline
	Benzenamine, 4-decyl-
	p-Decylaniline
	p-n-Decylaniline
Inchi:	InChI=1S/C16H27N/c1-2-3-4-5-6-7-8-9-10-15-11-13-16(17)14-12-15/h11-14H,2-10,17H2
InchiKey:	WGENWPANMZLPIH-UHFFFAOYSA-N
Formula:	C16H27N
SMILES:	CCCCCCCCCCc1ccc(N)cc1
Mol. weight [g/mol]:	233.39
CAS:	37529-30-9

Physical Properties

Property code	Value	Unit	Source
gf	253.07	kJ/mol	Joback Method
hf	-114.72	kJ/mol	Joback Method
hfus	36.04	kJ/mol	Joback Method
hvap	64.79	kJ/mol	Joback Method
log10ws	-5.26		Crippen Method
logp	4.952		Crippen Method
mcvol	222.520	ml/mol	McGowan Method
pc	1763.93	kPa	Joback Method
tb	669.67	K	Joback Method
tc	867.89	K	Joback Method
tf	392.28	K	Joback Method
vc	0.853	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	618.70	J/mol×K	669.67	Joback Method
cpg	636.70	J/mol×K	702.71	Joback Method
cpg	653.70	J/mol×K	735.74	Joback Method
cpg	669.76	J/mol×K	768.78	Joback Method
cpg	684.92	J/mol×K	801.82	Joback Method

cpg	699.22	J/mol×K	834.85	Joback Method
cpg	712.69	J/mol×K	867.89	Joback Method

Pressure Dependent Properties

Property code	Value	Unit	Pressure [kPa]	Source
tbrp	492.00 ± 1.00	K	1.90	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.43569e+01
Coeff. B	-4.66244e+03
Coeff. C	-9.96100e+01
Temperature range (K), min.	431.00
Temperature range (K), max.	615.05

Sources

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=C37529309&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

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
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