

UREA, TETRAETHYL-

Other names:	1,1,3,3-tetraethylurea N,N,N',N'-tetraethylurea tetraethylcarbamide tetraethylurea urea, 1,1,3,3-tetraethyl-
Inchi:	InChI=1S/C9H20N2O/c1-5-10(6-2)9(12)11(7-3)8-4/h5-8H2,1-4H3
InchiKey:	UWHSPZZUAYSGTB-UHFFFAOYSA-N
Formula:	C9H20N2O
SMILES:	CCN(CC)C(=O)N(CC)CC
Mol. weight [g/mol]:	172.27

Physical Properties

Property code	Value	Unit	Source
chl	-5845.90 ± 5.90	kJ/mol	NIST Webbook
chl	-6019.90 ± 4.80	kJ/mol	NIST Webbook
hf	-316.40 ± 5.00	kJ/mol	NIST Webbook
hfl	-380.00 ± 5.00	kJ/mol	NIST Webbook
hfl	-554.00 ± 5.90	kJ/mol	NIST Webbook
hfus	26.71	kJ/mol	Joback Method
hvap	62.16	kJ/mol	Cheméo Relay (1.0)
ie	7.89	eV	Cheméo Relay (1.0)
logp	1.790		Crippen Method
mcvol	159.200	ml/mol	McGowan Method
tb	482.00 ± 0.00	K	NIST Webbook
tb	482.00 ± 0.00	K	NIST Webbook
tf	255.19	K	Cheméo Relay (1.0)
tt	239.70 ± 0.10	K	NIST Webbook

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	363.64	J/mol×K	484.07	Joback Method
cpg	378.71	J/mol×K	512.54	Joback Method
cpg	393.09	J/mol×K	541.02	Joback Method

cpg	406.80	J/mol×K	569.49	Joback Method
cpg	419.87	J/mol×K	597.97	Joback Method
cpg	432.33	J/mol×K	626.44	Joback Method
cpg	444.18	J/mol×K	654.92	Joback Method
cpl	355.60	J/mol×K	298.15	NIST Webbook
hfust	20.55	kJ/mol	253.00	NIST Webbook
hfust	20.55	kJ/mol	253.00	NIST Webbook
hvapt	63.61 ± 0.55	kJ/mol	323.30	NIST Webbook

Sources

Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
Cheméo Relay (1.0):	
Cheméo Relay (1.0, beta):	
Hydrophobic-Hydrophilic Solvation of Various Substituted N-Alkylureas in Aqueous Solution: A Calorimetric Study at a Temperature of 298.15 K:	https://www.doi.org/10.1021/je9003405
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C1187037&Units=SI
Joback Method:	https://en.wikipedia.org/wiki/Joback_method
McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l

Legend

chl:	Standard liquid enthalpy of combustion
cpg:	Ideal gas heat capacity
cpl:	Liquid phase heat capacity
hf:	Enthalpy of formation at standard conditions
hfl:	Liquid phase enthalpy of formation at standard conditions
hfus:	Enthalpy of fusion at standard conditions
hfust:	Enthalpy of fusion at a given temperature
hvap:	Enthalpy of vaporization at standard conditions
hvapt:	Enthalpy of vaporization at a given temperature
ie:	Ionization energy
logp:	Octanol/Water partition coefficient
mcvol:	McGowan's characteristic volume
tb:	Normal Boiling Point Temperature
tf:	Normal melting (fusion) point
tt:	Triple Point Temperature

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