1,3-Bis(hydroxymethyl)urea

Other names:	Dimethylolurea
	Urea, N,N'-bis(hydroxymethyl)-
	Carbamol
	Caurite
	CSI Paste
	Dimethanol urea
	DMU
	Finish EN
	Kaurit S
	Knittex ASL
	Methural
	Metural
	N,N'-Bis(hydroxymethyl)urea
	N,N'-Dihydroxymethylurea
	N,N'-Dimethylolurea
	Oxymethurea
	Permafresh 477
	Protesine DMU
	Urea, 1,3-bis(hydroxymethyl)-
	Ureol P
	Urofix
	1,3-Dimethylolurea
	NSC 41819
	Papirol J 001
Inchi:	InChI=1S/C3H8N2O3/c6-1-4-3(8)5-2-7/h6-7H,1-2H2,(H2,4,5,8)
InchiKey:	QUBQYFYWUJJAAK-UHFFFAOYSA-N
Formula:	C3H8N2O3
SMILES:	O=C(NCO)NCO
Mol. weight [g/mol]:	120.11
CAS:	140-95-4

Physical Properties

Property code	Value	Unit	Source
gf	-249.40	kJ/mol	Joback Method
hf	-415.35	kJ/mol	Joback Method
hfus	23.50	kJ/mol	Joback Method

hvap	75.25	kJ/mol	Joback Method
log10ws	0.27		Crippen Method
logp	-1.815		Crippen Method
mcvol	86.400	ml/mol	McGowan Method
pc	6577.70	kPa	Joback Method
ss	173.60	J/mol×K	NIST Webbook
tb	606.61	K	Joback Method
tc	780.70	K	Joback Method
tf	400.46	K	Joback Method
vc	0.318	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	217.54	J/mol×K	606.61	Joback Method
cpg	223.34	J/mol×K	635.63	Joback Method
cpg	228.85	J/mol×K	664.64	Joback Method
cpg	234.08	J/mol×K	693.66	Joback Method
cpg	239.04	J/mol×K	722.67	Joback Method
cpg	243.73	J/mol×K	751.69	Joback Method
cpg	248.16	J/mol×K	780.70	Joback Method
cps	157.70	J/mol×K	300.00	NIST Webbook

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=C140954&Units=SI
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
cps: Solid 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
log10ws:	Log10 of Water solubility in mol/l
logp:	Octanol/Water partition coefficient
mcvol:	McGowan's characteristic volume
pc:	Critical Pressure
ss:	Solid phase molar entropy at standard conditions
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume