4,9-Dioxa-1,12-dodecanedinitrile

Other names:	3,3'-Tetramethylene-di-oxydipropionitrile
	3,3'-[butane-1,4-diylbis(oxy)]bispropiononitrile
Inchi:	InChI=1S/C10H16N2O2/c11-5-3-9-13-7-1-2-8-14-10-4-6-12/h1-4,7-10H2
InchiKey:	RCRNVWKZQROUJM-UHFFFAOYSA-N
Formula:	C10H16N2O2
SMILES:	N#CCCOCCCCOCCC#N
Mol. weight [g/mol]:	196.25
CAS:	18664-94-3

Physical Properties

Property code	Value	Unit	Source
gf	89.68	kJ/mol	Joback Method
hf	-184.41	kJ/mol	Joback Method
hfus	27.04	kJ/mol	Joback Method
hvap	63.63	kJ/mol	Joback Method
log10ws	-1.92		Crippen Method
logp	1.627		Crippen Method
mcvol	166.260	ml/mol	McGowan Method
pc	1954.41	kPa	Joback Method
tb	677.20	K	Joback Method
tc	871.10	K	Joback Method
tf	376.90	K	Joback Method
vc	0.683	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	438.01	J/mol×K	677.20	Joback Method
cpg	449.28	J/mol×K	709.52	Joback Method
cpg	459.99	J/mol×K	741.83	Joback Method
cpg	470.14	J/mol×K	774.15	Joback Method
cpg	479.73	J/mol×K	806.47	Joback Method
cpg	488.75	J/mol×K	838.79	Joback Method
cpg	497.21	J/mol×K	871.10	Joback Method

Sources

Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
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=C18664943&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l

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
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

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