4-oxodecanal

Inchi: InChI=1S/C10H18O2/c1-2-3-4-5-7-10(12)8-6-9-11/h9H,2-8H2,1H3
InchiKey: UKCSOARNKKNOCN-UHFFFAOYSA-N
Formula: C10H18O2
SMILES: CCCCCCC(=O)CCC=O
Mol. weight [g/mol]: 170.25

Physical Properties

Property code	Value	Unit	Source
gf	-195.12	kJ/mol	Joback Method
hf	-447.89	kJ/mol	Joback Method
hfus	25.54	kJ/mol	Joback Method
hvap	51.32	kJ/mol	Joback Method
log10ws	-2.57		Crippen Method
logp	2.505		Crippen Method
mcvol	154.900	ml/mol	McGowan Method
pc	2400.57	kPa	Joback Method
rinpol	1333.00		NIST Webbook
rinpol	1303.00		NIST Webbook
rinpol	1304.00		NIST Webbook
tb	530.73	K	Joback Method
tc	708.49	K	Joback Method
tf	294.39	K	Joback Method
vc	0.619	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	365.55	J/mol×K	530.73	Joback Method
cpg	426.10	J/mol×K	678.86	Joback Method
cpg	415.09	J/mol×K	649.24	Joback Method
cpg	403.55	J/mol×K	619.61	Joback Method
cpg	391.46	J/mol×K	589.98	Joback Method
cpg	378.79	J/mol×K	560.36	Joback Method
cpg	436.58	J/mol×K	708.49	Joback Method

dvisc	0.0003179	Pa×s	530.73	Joback Method
dvisc	0.0004104	Pa×s	491.34	Joback Method
dvisc	0.0005539	Pa×s	451.95	Joback Method
dvisc	0.0007918	Pa×s	412.56	Joback Method
dvisc	0.0012203	Pa×s	373.17	Joback Method
dvisc	0.0020830	Pa×s	333.78	Joback Method
dvisc	0.0041027	Pa×s	294.39	Joback Method

Sources

Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
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=R224405&Units=SI

Legend

cpg:	Ideal gas heat capacity
dvisc:	Dynamic viscosity
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
rinpol:	Non-polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume