

10-Hydroxydecanoic acid

Other names:	Decanoic acid, 10-hydroxy-
Inchi:	InChI=1S/C10H20O3/c11-9-7-5-3-1-2-4-6-8-10(12)13/h11H,1-9H2,(H,12,13)
InchiKey:	YJCJVMMDTBEITC-UHFFFAOYSA-N
Formula:	C10H20O3
SMILES:	O=C(O)CCCCCCCCCO
Mol. weight [g/mol]:	188.26
CAS:	1679-53-4

Physical Properties

Property code	Value	Unit	Source
gf	-369.24	kJ/mol	Joback Method
hf	-666.77	kJ/mol	Joback Method
hfs	-897.00 ± 3.00	kJ/mol	NIST Webbook
hfus	31.43	kJ/mol	Joback Method
hvap	77.96	kJ/mol	Joback Method
log10ws	-2.37		Crippen Method
logp	2.184		Crippen Method
mcvol	165.070	ml/mol	McGowan Method
pc	2681.86	kPa	Joback Method
tb	666.43	K	Joback Method
tc	832.12	K	Joback Method
tf	374.03	K	Joback Method
vc	0.639	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	459.34	J/mol×K	666.43	Joback Method
cpg	470.19	J/mol×K	694.05	Joback Method
cpg	480.57	J/mol×K	721.66	Joback Method
cpg	490.47	J/mol×K	749.28	Joback Method
cpg	499.93	J/mol×K	776.89	Joback Method
cpg	508.95	J/mol×K	804.51	Joback Method
cpg	517.55	J/mol×K	832.12	Joback Method

dvisc	0.0066140	Pa×s	374.03	Joback Method
dvisc	0.0014441	Pa×s	422.76	Joback Method
dvisc	0.0004319	Pa×s	471.50	Joback Method
dvisc	0.0001619	Pa×s	520.23	Joback Method
dvisc	0.0000718	Pa×s	568.96	Joback Method
dvisc	0.0000362	Pa×s	617.70	Joback Method
dvisc	0.0000202	Pa×s	666.43	Joback Method

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C1679534&Units=SI
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

Legend

cpg:	Ideal gas heat capacity
dvisc:	Dynamic viscosity
gf:	Standard Gibbs free energy of formation
hf:	Enthalpy of formation at standard conditions
hfs:	Solid phase 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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