

# 10-Hydroxydecanoic acid

<b>Other names:</b>	Decanoic acid, 10-hydroxy-
<b>Inchi:</b>	InChI=1S/C10H20O3/c11-9-7-5-3-1-2-4-6-8-10(12)13/h11H,1-9H2,(H,12,13)
<b>InchiKey:</b>	YJCJVMMDTBEITC-UHFFFAOYSA-N
<b>Formula:</b>	C10H20O3
<b>SMILES:</b>	O=C(O)CCCCCCCCO
<b>Mol. weight [g/mol]:</b>	188.26
<b>CAS:</b>	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/molxK	666.43	Joback Method
cpg	508.95	J/molxK	804.51	Joback Method
cpg	499.93	J/molxK	776.89	Joback Method
cpg	490.47	J/molxK	749.28	Joback Method
cpg	480.57	J/molxK	721.66	Joback Method
cpg	470.19	J/molxK	694.05	Joback Method
cpg	517.55	J/molxK	832.12	Joback Method

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

## Sources

<b>McGowan Method:</b>	<a href="http://link.springer.com/article/10.1007/BF02311772">http://link.springer.com/article/10.1007/BF02311772</a>
<b>NIST Webbook:</b>	<a href="http://webbook.nist.gov/cgi/cbook.cgi?ID=C1679534&amp;Units=SI">http://webbook.nist.gov/cgi/cbook.cgi?ID=C1679534&amp;Units=SI</a>
<b>Crippen Method:</b>	<a href="http://pubs.acs.org/doi/abs/10.1021/ci990307l">http://pubs.acs.org/doi/abs/10.1021/ci990307l</a>
<b>Crippen Method:</b>	<a href="https://www.chemeo.com/doc/models/crippen_log10ws">https://www.chemeo.com/doc/models/crippen_log10ws</a>
<b>Joback Method:</b>	<a href="https://en.wikipedia.org/wiki/Joback_method">https://en.wikipedia.org/wiki/Joback_method</a>

## Legend

<b>cpg:</b>	Ideal gas heat capacity
<b>dvisc:</b>	Dynamic viscosity
<b>gf:</b>	Standard Gibbs free energy of formation
<b>hf:</b>	Enthalpy of formation at standard conditions
<b>hfs:</b>	Solid phase enthalpy of formation at standard conditions
<b>hfus:</b>	Enthalpy of fusion at standard conditions
<b>hvap:</b>	Enthalpy of vaporization at standard conditions
<b>log10ws:</b>	Log10 of Water solubility in mol/l
<b>logp:</b>	Octanol/Water partition coefficient
<b>mcvol:</b>	McGowan's characteristic volume
<b>pc:</b>	Critical Pressure
<b>tb:</b>	Normal Boiling Point Temperature
<b>tc:</b>	Critical Temperature
<b>tf:</b>	Normal melting (fusion) point
<b>vc:</b>	Critical Volume

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