

# Octadecanoic acid, ethenyl ester

<b>Other names:</b>	Stearic acid, vinyl ester Vinyl stearate
<b>Inchi:</b>	InChI=1S/C20H38O2/c1-3-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-20(21)22-4-2/h4H,2
<b>InchiKey:</b>	AFSIMBWBBQJPJG-UHFFFAOYSA-N
<b>Formula:</b>	C20H38O2
<b>SMILES:</b>	C=COC(=O)CCCCCCCCCCCCCCCCCC
<b>Mol. weight [g/mol]:</b>	310.51
<b>CAS:</b>	111-63-7

## Physical Properties

Property code	Value	Unit	Source
gf	-28.56	kJ/mol	Joback Method
hf	-575.50	kJ/mol	Joback Method
hfus	49.06	kJ/mol	Joback Method
hvap	68.60	kJ/mol	Joback Method
log10ws	-7.41		Crippen Method
logp	6.935		Crippen Method
mvol	295.800	ml/mol	McGowan Method
pc	1074.98	kPa	Joback Method
tb	729.97	K	Joback Method
tc	902.05	K	Joback Method
tf	385.56	K	Joback Method
vc	1.161	m <sup>3</sup> /kmol	Joback Method

## Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	883.13	J/molxK	729.97	Joback Method
cpg	970.07	J/molxK	873.37	Joback Method
cpg	954.38	J/molxK	844.69	Joback Method
cpg	937.86	J/molxK	816.01	Joback Method
cpg	920.50	J/molxK	787.33	Joback Method
cpg	902.27	J/molxK	758.65	Joback Method
cpg	984.96	J/molxK	902.05	Joback Method

dvisc	0.0000776	Paxs	729.97	Joback Method
dvisc	0.0001040	Paxs	672.57	Joback Method
dvisc	0.0001470	Paxs	615.17	Joback Method
dvisc	0.0002232	Paxs	557.76	Joback Method
dvisc	0.0003730	Paxs	500.36	Joback Method
dvisc	0.0007121	Paxs	442.96	Joback Method
dvisc	0.0016482	Paxs	385.56	Joback Method

## Sources

<b>Crippen Method:</b>	<a href="http://pubs.acs.org/doi/abs/10.1021/ci9903071">http://pubs.acs.org/doi/abs/10.1021/ci9903071</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>
<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=C111637&amp;Units=SI">http://webbook.nist.gov/cgi/cbook.cgi?ID=C111637&amp;Units=SI</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>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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