

Ethyl 9,12,15-octadecatrienoate

Other names:	9,12,14-octadecatrienoic acid, ethyl ester 9,12,15-Octadecatrienoic acid, ethyl ester Ethyl 9«alpha»-linolenate ethyl linolenate linolinic acid, ethyl ester
Inchi:	InChI=1S/C20H34O2/c1-3-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-20(21)22-4-2/h5-6,
InchiKey:	JYYFMIOPGOFNPK-AGRJPVHOSA-N
Formula:	C20H34O2
SMILES:	CCC=CCC=CCC=CCCCCCCC(=O)OCC
Mol. weight [g/mol]:	306.48

Physical Properties

Property code	Value	Unit	Source
gf	124.26	kJ/mol	Joback Method
hf	-349.27	kJ/mol	Joback Method
hfus	50.95	kJ/mol	Joback Method
hvap	69.14	kJ/mol	Joback Method
log10ws	-6.62		Crippen Method
logp	6.139		Crippen Method
mcvol	287.200	ml/mol	McGowan Method
pc	1160.08	kPa	Joback Method
rinpol	2153.00		NIST Webbook
rinpol	2153.00		NIST Webbook
rinpol	2135.00		NIST Webbook
rinpol	2148.00		NIST Webbook
rinpol	2170.00		NIST Webbook
ripol	2594.00		NIST Webbook
ripol	2545.00		NIST Webbook
tb	745.77	K	Joback Method
tc	927.85	K	Joback Method
tf	372.08	K	Joback Method
vc	1.119	m ³ /kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	935.36	J/molxK	927.85	Joback Method
cpg	921.08	J/molxK	897.50	Joback Method
cpg	906.13	J/molxK	867.15	Joback Method
cpg	890.45	J/molxK	836.81	Joback Method
cpg	874.01	J/molxK	806.46	Joback Method
cpg	856.73	J/molxK	776.12	Joback Method
cpg	838.59	J/molxK	745.77	Joback Method
dvisc	0.0018658	Paxs	343.15	Densities and Viscosities of Minority Fatty Acid Methyl and Ethyl Esters Present in Biodiesel
dvisc	0.0027281	Paxs	318.15	Densities and Viscosities of Minority Fatty Acid Methyl and Ethyl Esters Present in Biodiesel
dvisc	0.0025114	Paxs	323.15	Densities and Viscosities of Minority Fatty Acid Methyl and Ethyl Esters Present in Biodiesel
dvisc	0.0023204	Paxs	328.15	Densities and Viscosities of Minority Fatty Acid Methyl and Ethyl Esters Present in Biodiesel
dvisc	0.0021511	Paxs	333.15	Densities and Viscosities of Minority Fatty Acid Methyl and Ethyl Esters Present in Biodiesel
dvisc	0.0020004	Paxs	338.15	Densities and Viscosities of Minority Fatty Acid Methyl and Ethyl Esters Present in Biodiesel

dvisc	0.0029750	Paxs	313.15	Densities and Viscosities of Minority Fatty Acid Methyl and Ethyl Esters Present in Biodiesel
dvisc	0.0017450	Paxs	348.15	Densities and Viscosities of Minority Fatty Acid Methyl and Ethyl Esters Present in Biodiesel
dvisc	0.0016362	Paxs	353.15	Densities and Viscosities of Minority Fatty Acid Methyl and Ethyl Esters Present in Biodiesel
dvisc	0.0015382	Paxs	358.15	Densities and Viscosities of Minority Fatty Acid Methyl and Ethyl Esters Present in Biodiesel
dvisc	0.0014491	Paxs	363.15	Densities and Viscosities of Minority Fatty Acid Methyl and Ethyl Esters Present in Biodiesel
dvisc	0.0013684	Paxs	368.15	Densities and Viscosities of Minority Fatty Acid Methyl and Ethyl Esters Present in Biodiesel
dvisc	0.0012950	Paxs	373.15	Densities and Viscosities of Minority Fatty Acid Methyl and Ethyl Esters Present in Biodiesel
dvisc	0.0032578	Paxs	308.15	Densities and Viscosities of Minority Fatty Acid Methyl and Ethyl Esters Present in Biodiesel
dvisc	0.0035831	Paxs	303.15	Densities and Viscosities of Minority Fatty Acid Methyl and Ethyl Esters Present in Biodiesel

dvisc	0.0039606	Paxs	298.15	Densities and Viscosities of Minority Fatty Acid Methyl and Ethyl Esters Present in Biodiesel
dvisc	0.0044014	Paxs	293.15	Densities and Viscosities of Minority Fatty Acid Methyl and Ethyl Esters Present in Biodiesel
dvisc	0.0049210	Paxs	288.15	Densities and Viscosities of Minority Fatty Acid Methyl and Ethyl Esters Present in Biodiesel
dvisc	0.0055379	Paxs	283.15	Densities and Viscosities of Minority Fatty Acid Methyl and Ethyl Esters Present in Biodiesel
dvisc	0.0062820	Paxs	278.15	Densities and Viscosities of Minority Fatty Acid Methyl and Ethyl Esters Present in Biodiesel

Sources

Crippen Method:

https://www.chemeo.com/doc/models/crippen_log10ws

Densities and Viscosities of Minority Fatty Acid Methyl and Ethyl Esters Present in Biodiesel:

<https://www.doi.org/10.1021/je1012235>

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=U336774&Units=SI>

Crippen Method:

<http://pubs.acs.org/doi/abs/10.1021/ci9903071>

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
rinpolar:	Non-polar retention indices
ripolar:	Polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

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