

cis-11-Eicosenoic acid, methyl ester

Other names:	(Z)-Methyl eicosa-11-enoate 11-Eicosenoic acid, methyl ester, (Z)- Methyl (Z)-11-eicosenoate cis-Methyl 11-eicosenoate methyl cis-11-eicosenoate methyl cis-icos-11-enoate
Inchi:	InChI=1S/C21H40O2/c1-3-4-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-20-21(22)23-2/h1
InchiKey:	RBKMRGOHCLRTLZ-KHPPLWFESA-N
Formula:	C21H40O2
SMILES:	CCCCCCCCC=CCCCCCCCCCC(=O)OC
Mol. weight [g/mol]:	324.54
CAS:	2390-09-2

Physical Properties

Property code	Value	Unit	Source
chl	-13190.00	kJ/mol	NIST Webbook
gf	-27.76	kJ/mol	Joback Method
hf	-604.35	kJ/mol	Joback Method
hfus	53.13	kJ/mol	Joback Method
hvap	115.80 ± 0.70	kJ/mol	NIST Webbook
log10ws	-7.33		Crippen Method
logp	6.977		Crippen Method
mcvol	309.890	ml/mol	McGowan Method
pc	1016.83	kPa	Joback Method
rinpol	2279.00		NIST Webbook
rinpol	2302.00		NIST Webbook
rinpol	2278.00		NIST Webbook
rinpol	2278.00		NIST Webbook
rinpol	2279.00		NIST Webbook
rinpol	2309.50		NIST Webbook
tb	760.33	K	Joback Method
tc	936.69	K	Joback Method
tf	393.51	K	Joback Method
vc	1.216	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	1049.56	J/molxK	936.69	Joback Method
cpg	945.68	J/molxK	760.33	Joback Method
cpg	965.24	J/molxK	789.72	Joback Method
cpg	983.86	J/molxK	819.12	Joback Method
cpg	1001.56	J/molxK	848.51	Joback Method
cpg	1018.40	J/molxK	877.90	Joback Method
cpg	1034.38	J/molxK	907.29	Joback Method
dvisc	0.0017576	Paxs	373.15	Densities and Viscosities of Minority Fatty Acid Methyl and Ethyl Esters Present in Biodiesel
dvisc	0.0143400	Paxs	278.15	Densities and Viscosities of Minority Fatty Acid Methyl and Ethyl Esters Present in Biodiesel
dvisc	0.0119750	Paxs	283.15	Densities and Viscosities of Minority Fatty Acid Methyl and Ethyl Esters Present in Biodiesel
dvisc	0.0101310	Paxs	288.15	Densities and Viscosities of Minority Fatty Acid Methyl and Ethyl Esters Present in Biodiesel
dvisc	0.0086667	Paxs	293.15	Densities and Viscosities of Minority Fatty Acid Methyl and Ethyl Esters Present in Biodiesel
dvisc	0.0074879	Paxs	298.15	Densities and Viscosities of Minority Fatty Acid Methyl and Ethyl Esters Present in Biodiesel

dvisc	0.0065284	Paxs	303.15	Densities and Viscosities of Minority Fatty Acid Methyl and Ethyl Esters Present in Biodiesel	
dvisc	0.0057379	Paxs	308.15	Densities and Viscosities of Minority Fatty Acid Methyl and Ethyl Esters Present in Biodiesel	
dvisc	0.0050803	Paxs	313.15	Densities and Viscosities of Minority Fatty Acid Methyl and Ethyl Esters Present in Biodiesel	
dvisc	0.0045289	Paxs	318.15	Densities and Viscosities of Minority Fatty Acid Methyl and Ethyl Esters Present in Biodiesel	
dvisc	0.0040624	Paxs	323.15	Densities and Viscosities of Minority Fatty Acid Methyl and Ethyl Esters Present in Biodiesel	
dvisc	0.0036649	Paxs	328.15	Densities and Viscosities of Minority Fatty Acid Methyl and Ethyl Esters Present in Biodiesel	
dvisc	0.0033231	Paxs	333.15	Densities and Viscosities of Minority Fatty Acid Methyl and Ethyl Esters Present in Biodiesel	
dvisc	0.0030278	Paxs	338.15	Densities and Viscosities of Minority Fatty Acid Methyl and Ethyl Esters Present in Biodiesel	
dvisc	0.0027709	Paxs	343.15	Densities and Viscosities of Minority Fatty Acid Methyl and Ethyl Esters Present in Biodiesel	

dvisc	0.0025461	Paxs	348.15	Densities and Viscosities of Minority Fatty Acid Methyl and Ethyl Esters Present in Biodiesel
dvisc	0.0023484	Paxs	353.15	Densities and Viscosities of Minority Fatty Acid Methyl and Ethyl Esters Present in Biodiesel
dvisc	0.0021736	Paxs	358.15	Densities and Viscosities of Minority Fatty Acid Methyl and Ethyl Esters Present in Biodiesel
dvisc	0.0020186	Paxs	363.15	Densities and Viscosities of Minority Fatty Acid Methyl and Ethyl Esters Present in Biodiesel
dvisc	0.0018807	Paxs	368.15	Densities and Viscosities of Minority Fatty Acid Methyl and Ethyl Esters Present in Biodiesel
hvapt	115.80	kJ/mol	298.15	the vaporization enthalpies and vapor pressures of a series of unstaured fatty acid methyl esters by correlation gas chromatography

Sources

the vaporization enthalpies and vapor pressures of a series of unstaured fatty acids and Viscosities of Minority Fatty Acid Methyl and Ethyl Esters Present in Biodiesel:

McGowan Method:

NIST Webbook:

Crippen Method:

Crippen Method:

<https://www.doi.org/10.1016/j.tca.2007.02.008>

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

https://en.wikipedia.org/wiki/Joback_method

<http://link.springer.com/article/10.1007/BF02311772>

<http://webbook.nist.gov/cgi/cbook.cgi?ID=C2390092&Units=SI>

<http://pubs.acs.org/doi/abs/10.1021/ci990307I>

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

Legend

chl:	Standard liquid enthalpy of combustion
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
hvapt:	Enthalpy of vaporization at a given temperature
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

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