

Decanoic acid, ethyl ester

Other names:	Capric acid, ethyl ester Ethyl caprate Ethyl caprylate Ethyl decanoate Ethyl decylate Ethyl ester of decanoic acid Ethyl n-decanoate NSC 8909 n-Capric acid ethyl ester
Inchi:	InChI=1S/C12H24O2/c1-3-5-6-7-8-9-10-11-12(13)14-4-2/h3-11H2,1-2H3
InchiKey:	RGXWDWUGBIJHDO-UHFFFAOYSA-N
Formula:	C12H24O2
SMILES:	CCCCCCCCC(=O)OCC
Mol. weight [g/mol]:	200.32
CAS:	110-38-3

Physical Properties

Property code	Value	Unit	Source
chl	-7448.00 ± 1.00	kJ/mol	NIST Webbook
gf	-183.76	kJ/mol	Joback Method
hf	-612.00 ± 2.00	kJ/mol	NIST Webbook
hfl	-679.60 ± 1.10	kJ/mol	NIST Webbook
hfus	32.29	kJ/mol	Thermodynamics of Ethyl Decanoate
hvap	70.50	kJ/mol	NIST Webbook
hvap	67.00 ± 1.00	kJ/mol	NIST Webbook
hvap	67.60	kJ/mol	NIST Webbook
hvap	67.40 ± 1.30	kJ/mol	NIST Webbook
log10ws	-4.10		Aqueous Solubility Prediction Method
log10ws	-4.10		Estimated Solubility Method
logp	3.690		Crippen Method
mcvol	187.380	ml/mol	McGowan Method
pc	1851.52	kPa	Joback Method
rinpol	1394.00		NIST Webbook
rinpol	1398.00		NIST Webbook
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rinpol	1379.00	NIST Webbook
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ripol	1647.00		NIST Webbook
ripol	1595.00		NIST Webbook
ripol	1647.00		NIST Webbook
ripol	1660.00		NIST Webbook
tb	518.05 ± 1.00	K	NIST Webbook
tb	514.70 ± 1.00	K	NIST Webbook
tb	518.20	K	NIST Webbook
tc	720.05	K	Joback Method
tf	297.16	K	Joback Method
tt	252.00	K	Heat capacities of potential organic phase change materials
vc	0.732	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	523.23	J/mol×K	663.45	Joback Method
cpg	464.17	J/mol×K	550.25	Joback Method
cpg	549.22	J/mol×K	720.05	Joback Method
cpg	479.84	J/mol×K	578.55	Joback Method
cpg	494.90	J/mol×K	606.85	Joback Method
cpg	536.51	J/mol×K	691.75	Joback Method
cpg	509.36	J/mol×K	635.15	Joback Method
dvisc	0.0010171	Pa×s	343.15	Densities and Viscosities of Fatty Acid Methyl and Ethyl Esters

dvisc	0.0019111	Pa×s	303.15	Densities and Viscosities of Fatty Acid Methyl and Ethyl Esters
dvisc	0.0021029	Pa×s	298.15	Densities and Viscosities of Fatty Acid Methyl and Ethyl Esters
dvisc	0.0028960	Pa×s	283.15	Densities and Viscosities of Fatty Acid Methyl and Ethyl Esters
dvisc	0.0010892	Pa×s	338.15	Densities and Viscosities of Fatty Acid Methyl and Ethyl Esters
dvisc	0.0025882	Pa×s	288.15	Densities and Viscosities of Fatty Acid Methyl and Ethyl Esters
dvisc	0.0014729	Pa×s	318.15	Densities and Viscosities of Fatty Acid Methyl and Ethyl Esters
dvisc	0.0012594	Pa×s	328.15	Densities and Viscosities of Fatty Acid Methyl and Ethyl Esters
dvisc	0.0008929	Pa×s	353.15	Densities and Viscosities of Fatty Acid Methyl and Ethyl Esters
dvisc	0.0017453	Pa×s	308.15	Densities and Viscosities of Fatty Acid Methyl and Ethyl Esters
dvisc	0.0016000	Pa×s	313.15	Densities and Viscosities of Fatty Acid Methyl and Ethyl Esters
dvisc	0.0011695	Pa×s	333.15	Densities and Viscosities of Fatty Acid Methyl and Ethyl Esters
dvisc	0.0023263	Pa×s	293.15	Densities and Viscosities of Fatty Acid Methyl and Ethyl Esters
dvisc	0.0013599	Pa×s	323.15	Densities and Viscosities of Fatty Acid Methyl and Ethyl Esters
dvisc	0.0009516	Pa×s	348.15	Densities and Viscosities of Fatty Acid Methyl and Ethyl Esters
hfust	32.29	kJ/mol	187.50	NIST Webbook
hvapt	69.90 ± 0.70	kJ/mol	305.00	NIST Webbook
hvapt	59.60	kJ/mol	437.00	NIST Webbook

hvapt	58.40 ± 0.10	kJ/mol	422.00	NIST Webbook
pvap	2.50	kPa	403.15	Isothermal Vapor Liquid Equilibria of n-Tetradecane + Ethyl Hexanoate, Ethyl Decanoate, and Ethyl Tetradecanoate
pvap	11.99	kPa	443.15	Isothermal Vapor Liquid Equilibria of n-Tetradecane + Ethyl Hexanoate, Ethyl Decanoate, and Ethyl Tetradecanoate
pvap	16.84	kPa	453.15	Isothermal Vapor Liquid Equilibria of n-Tetradecane + Ethyl Hexanoate, Ethyl Decanoate, and Ethyl Tetradecanoate
pvap	8.37	kPa	433.15	Isothermal Vapor Liquid Equilibria of n-Tetradecane + Ethyl Hexanoate, Ethyl Decanoate, and Ethyl Tetradecanoate
pvap	5.73	kPa	423.15	Isothermal Vapor Liquid Equilibria of n-Tetradecane + Ethyl Hexanoate, Ethyl Decanoate, and Ethyl Tetradecanoate
pvap	3.83	kPa	413.15	Isothermal Vapor Liquid Equilibria of n-Tetradecane + Ethyl Hexanoate, Ethyl Decanoate, and Ethyl Tetradecanoate
pvap	1.59	kPa	393.15	Isothermal Vapor Liquid Equilibria of n-Tetradecane + Ethyl Hexanoate, Ethyl Decanoate, and Ethyl Tetradecanoate

pvap	0.98	kPa	383.15	Isothermal Vapor Liquid Equilibria of n-Tetradecane + Ethyl Hexanoate, Ethyl Decanoate, and Ethyl Tetradecanoate
pvap	0.58	kPa	373.15	Isothermal Vapor Liquid Equilibria of n-Tetradecane + Ethyl Hexanoate, Ethyl Decanoate, and Ethyl Tetradecanoate
pvap	22.35	kPa	462.37	Experimental Vapor Pressures of Five Saturated Fatty Acid Ethyl Ester (FAEE) Components of Biodiesel
pvap	16.28	kPa	452.28	Experimental Vapor Pressures of Five Saturated Fatty Acid Ethyl Ester (FAEE) Components of Biodiesel
pvap	11.55	kPa	442.23	Experimental Vapor Pressures of Five Saturated Fatty Acid Ethyl Ester (FAEE) Components of Biodiesel
pvap	5.47	kPa	422.13	Experimental Vapor Pressures of Five Saturated Fatty Acid Ethyl Ester (FAEE) Components of Biodiesel
pvap	3.65	kPa	412.15	Experimental Vapor Pressures of Five Saturated Fatty Acid Ethyl Ester (FAEE) Components of Biodiesel
pvap	0.33	kPa	363.12	Experimental Vapor Pressures of Five Saturated Fatty Acid Ethyl Ester (FAEE) Components of Biodiesel

pvap	0.18	kPa	353.16	Experimental Vapor Pressures of Five Saturated Fatty Acid Ethyl Ester (FAEE) Components of Biodiesel	
pvap	0.10	kPa	343.20	Experimental Vapor Pressures of Five Saturated Fatty Acid Ethyl Ester (FAEE) Components of Biodiesel	
pvap	0.01	kPa	313.16	Experimental Vapor Pressures of Five Saturated Fatty Acid Ethyl Ester (FAEE) Components of Biodiesel	
pvap	4.46e-03	kPa	303.10	Experimental Vapor Pressures of Five Saturated Fatty Acid Ethyl Ester (FAEE) Components of Biodiesel	
pvap	0.05	kPa	333.23	Experimental Vapor Pressures of Five Saturated Fatty Acid Ethyl Ester (FAEE) Components of Biodiesel	
pvap	8.07	kPa	432.24	Experimental Vapor Pressures of Five Saturated Fatty Acid Ethyl Ester (FAEE) Components of Biodiesel	
rfi	1.41512		318.15	Thermophysical properties of fatty acid methyl and ethyl esters	
rfi	1.41297		323.15	Thermophysical properties of fatty acid methyl and ethyl esters	
rfi	1.40451		343.15	Thermophysical properties of fatty acid methyl and ethyl esters	
rfi	1.40661		338.15	Thermophysical properties of fatty acid methyl and ethyl esters	
rfi	1.40873		333.15	Thermophysical properties of fatty acid methyl and ethyl esters	

rfi	1.41084		328.15	Thermophysical properties of fatty acid methyl and ethyl esters
rfi	1.39826		358.15	Thermophysical properties of fatty acid methyl and ethyl esters
rfi	1.43213		278.15	Thermophysical properties of fatty acid methyl and ethyl esters
rfi	1.43000		283.15	Thermophysical properties of fatty acid methyl and ethyl esters
rfi	1.42789		288.15	Thermophysical properties of fatty acid methyl and ethyl esters
rfi	1.42577		293.15	Thermophysical properties of fatty acid methyl and ethyl esters
rfi	1.42366		298.15	Thermophysical properties of fatty acid methyl and ethyl esters
rfi	1.42155		303.15	Thermophysical properties of fatty acid methyl and ethyl esters
rfi	1.41944		308.15	Thermophysical properties of fatty acid methyl and ethyl esters
rfi	1.41729		313.15	Thermophysical properties of fatty acid methyl and ethyl esters
rfi	1.40034		353.15	Thermophysical properties of fatty acid methyl and ethyl esters
rfi	1.40241		348.15	Thermophysical properties of fatty acid methyl and ethyl esters
rhoI	839.69	kg/m3	323.15	Measurement and correlation of density and viscosity of n-hexadecane with three fatty acid ethyl esters

rhoI	839.64	kg/m3	323.15	Density, Viscosity, and Refractive Index of Binary Mixtures of Fatty Acid Ethyl Esters with Ethylcyclohexane	
rhoI	843.72	kg/m3	318.15	Density, Viscosity, and Refractive Index of Binary Mixtures of Fatty Acid Ethyl Esters with Ethylcyclohexane	
rhoI	847.80	kg/m3	313.15	Density, Viscosity, and Refractive Index of Binary Mixtures of Fatty Acid Ethyl Esters with Ethylcyclohexane	
rhoI	851.87	kg/m3	308.15	Density, Viscosity, and Refractive Index of Binary Mixtures of Fatty Acid Ethyl Esters with Ethylcyclohexane	
rhoI	860.01	kg/m3	298.15	Density, Viscosity, and Refractive Index of Binary Mixtures of Fatty Acid Ethyl Esters with Ethylcyclohexane	
rhoI	847.85	kg/m3	313.15	Measurement and correlation of density and viscosity of n-hexadecane with three fatty acid ethyl esters	
rhoI	851.92	kg/m3	308.15	Measurement and correlation of density and viscosity of n-hexadecane with three fatty acid ethyl esters	
rhoI	855.99	kg/m3	303.15	Measurement and correlation of density and viscosity of n-hexadecane with three fatty acid ethyl esters	

rhoI	860.05	kg/m ³	298.15	Measurement and correlation of density and viscosity of n-hexadecane with three fatty acid ethyl esters
rhoI	855.94	kg/m ³	303.15	Density, Viscosity, and Refractive Index of Binary Mixtures of Fatty Acid Ethyl Esters with Ethylcyclohexane
rhoI	843.77	kg/m ³	318.15	Measurement and correlation of density and viscosity of n-hexadecane with three fatty acid ethyl esters
rhoI	864.06	kg/m ³	293.15	Density, Viscosity, and Refractive Index of Binary Mixtures of Fatty Acid Ethyl Esters with Ethylcyclohexane
tcondI	0.14	W/m×K	329.53	Measurement on the thermal conductivity of five saturated fatty acid ethyl esters components of biodiesel
tcondI	0.12	W/m×K	389.25	Measurement on the thermal conductivity of five saturated fatty acid ethyl esters components of biodiesel
tcondI	0.12	W/m×K	379.49	Measurement on the thermal conductivity of five saturated fatty acid ethyl esters components of biodiesel
tcondI	0.12	W/m×K	374.44	Measurement on the thermal conductivity of five saturated fatty acid ethyl esters components of biodiesel

tcondl	0.13	W/m×K	359.46	Measurement on the thermal conductivity of five saturated fatty acid ethyl esters components of biodiesel	
tcondl	0.13	W/m×K	349.51	Measurement on the thermal conductivity of five saturated fatty acid ethyl esters components of biodiesel	
tcondl	0.13	W/m×K	339.49	Measurement on the thermal conductivity of five saturated fatty acid ethyl esters components of biodiesel	
tcondl	0.12	W/m×K	400.44	Measurement on the thermal conductivity of five saturated fatty acid ethyl esters components of biodiesel	
tcondl	0.14	W/m×K	319.72	Measurement on the thermal conductivity of five saturated fatty acid ethyl esters components of biodiesel	
tcondl	0.14	W/m×K	309.60	Measurement on the thermal conductivity of five saturated fatty acid ethyl esters components of biodiesel	
tcondl	0.14	W/m×K	299.64	Measurement on the thermal conductivity of five saturated fatty acid ethyl esters components of biodiesel	

tcondl	0.14	W/m×K	289.85	Measurement on the thermal conductivity of five saturated fatty acid ethyl esters components of biodiesel
tcondl	0.15	W/m×K	279.98	Measurement on the thermal conductivity of five saturated fatty acid ethyl esters components of biodiesel
tcondl	0.15	W/m×K	270.00	Measurement on the thermal conductivity of five saturated fatty acid ethyl esters components of biodiesel
tcondl	0.13	W/m×K	369.30	Measurement on the thermal conductivity of five saturated fatty acid ethyl esters components of biodiesel

Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
Coeff. A	1.48029e+01
Coeff. B	-4.41987e+03
Coeff. C	-8.42230e+01
Temperature range (K), min.	388.72
Temperature range (K), max.	549.89

Datasets

Viscosity, Pa*s

Pressure, kPa - Liquid	Temperature, K - Liquid	Viscosity, Pa*s - Liquid
101.30	293.15	0.0023400
20000.00	293.15	0.0029400
40000.00	293.15	0.0036200
60000.00	293.15	0.0044000
80000.00	293.15	0.0052900
100000.00	293.15	0.0063000
120000.00	293.15	0.0074500
140000.00	293.15	0.0087800
160000.00	293.15	0.0103000
180000.00	293.15	0.0120600
200000.00	293.15	0.0141000
101.30	313.15	0.0015900
20000.00	313.15	0.0019600
40000.00	313.15	0.0023800
60000.00	313.15	0.0028500
80000.00	313.15	0.0033700
100000.00	313.15	0.0039600
120000.00	313.15	0.0046200
140000.00	313.15	0.0053500
160000.00	313.15	0.0061800
180000.00	313.15	0.0071100
200000.00	313.15	0.0081600
101.30	333.15	0.0011600
20000.00	333.15	0.0014400
40000.00	333.15	0.0017400
60000.00	333.15	0.0020600
80000.00	333.15	0.0024200
100000.00	333.15	0.0028100
120000.00	333.15	0.0032300
140000.00	333.15	0.0037000
160000.00	333.15	0.0042200
180000.00	333.15	0.0047800
200000.00	333.15	0.0054100
101.30	353.15	0.0008880
20000.00	353.15	0.0011000
40000.00	353.15	0.0013200
60000.00	353.15	0.0015600
80000.00	353.15	0.0018200
100000.00	353.15	0.0021000

120000.00	353.15	0.0024000
140000.00	353.15	0.0027300
160000.00	353.15	0.0030800
180000.00	353.15	0.0034600
200000.00	353.15	0.0038800

Reference

<https://www.doi.org/10.1021/je500980a>

Speed of sound, m/s

Temperature, K - Liquid	Pressure, kPa - Liquid	Speed of sound, m/s - Liquid
300.78	100.00	1283.2
310.85	100.00	1248.4
320.90	100.00	1213.6
330.81	100.00	1178.4
340.24	100.00	1144.5
350.99	100.00	1106.3
360.32	100.00	1073.2
371.22	100.00	1035.6
379.78	100.00	1005.8
389.06	100.00	973.3
400.76	100.00	933.3
410.85	100.00	900.2
419.60	100.00	871.4
429.56	100.00	839.8
439.28	100.00	809.5
451.03	100.00	773.3
460.11	100.00	746.8
469.45	100.00	719.5
479.25	100.00	691.6
340.79	3000.00	1157.6
350.77	3000.00	1124.1
360.75	3000.00	1090.9
371.46	3000.00	1054.6
379.78	3000.00	1026.4
311.01	3000.00	1258.4
389.32	3000.00	996.7
400.79	3000.00	958.4
408.81	3000.00	933.4
320.94	3000.00	1226.4
419.67	3000.00	899.1

429.56	3000.00	868.5
439.85	3000.00	836.6
450.25	3000.00	805.8
330.76	3000.00	1192.9
459.85	3000.00	778.6
469.25	3000.00	752.4
300.79	3000.00	1290.7
479.29	3000.00	724.5
490.81	3000.00	693.8
500.76	3000.00	667.8
510.65	3000.00	642.8
520.19	3000.00	619.7
530.36	3000.00	595.4
540.66	3000.00	570.8
548.94	3000.00	551.9
558.46	3000.00	529.8
389.19	5000.00	1010.9
400.90	5000.00	973.6
409.55	5000.00	946.8
320.91	5000.00	1233.3
350.97	5000.00	1133.3
419.68	5000.00	915.0
429.60	5000.00	884.8
310.85	5000.00	1265.0
440.02	5000.00	854.6
360.51	5000.00	1102.5
450.25	5000.00	825.6
458.86	5000.00	801.3
300.81	5000.00	1295.7
469.28	5000.00	771.9
479.90	5000.00	743.2
490.41	5000.00	715.7
371.31	5000.00	1068.1
500.41	5000.00	690.3
510.27	5000.00	666.3
379.62	5000.00	1040.4
520.25	5000.00	642.5
529.91	5000.00	619.5
540.12	5000.00	595.3
340.76	5000.00	1166.4
549.74	5000.00	574.5
330.87	5000.00	1199.5
559.93	5000.00	551.9
440.37	7000.00	871.6

449.52	7000.00	845.4
350.89	7000.00	1145.9
360.55	7000.00	1115.4
410.30	7000.00	960.7
330.77	7000.00	1210.4
460.20	7000.00	816.0
469.32	7000.00	792.0
300.71	7000.00	1302.7
371.22	7000.00	1081.7
479.47	7000.00	764.5
488.69	7000.00	740.9
339.12	7000.00	1183.0
419.73	7000.00	932.2
500.55	7000.00	711.6
510.41	7000.00	686.9
379.56	7000.00	1055.4
320.98	7000.00	1241.3
520.27	7000.00	664.6
400.81	7000.00	989.3
530.11	7000.00	641.3
310.93	7000.00	1271.5
540.06	7000.00	618.1
430.45	7000.00	901.1
549.99	7000.00	596.7
389.22	7000.00	1025.0
562.07	7000.00	570.2
411.61	10000.00	983.4
448.51	10000.00	878.1
340.56	10000.00	1209.4
509.33	10000.00	722.7
423.29	10000.00	949.4
330.79	10000.00	1239.7
470.42	10000.00	819.1
520.04	10000.00	696.8
392.15	10000.00	1042.5
360.27	10000.00	1145.7
350.12	10000.00	1179.1
529.04	10000.00	678.0
401.26	10000.00	1015.0
300.78	10000.00	1329.5
481.50	10000.00	791.1
463.71	10000.00	837.3
540.09	10000.00	651.8
310.58	10000.00	1301.3

432.01	10000.00	925.0
383.22	10000.00	1069.6
439.20	10000.00	903.9
549.87	10000.00	630.6
369.47	10000.00	1115.6
321.00	10000.00	1269.6
492.02	10000.00	764.5
561.00	10000.00	607.0
499.48	10000.00	745.9

Reference

<https://www.doi.org/10.1016/j.fluid.2019.112274>

Temperature, K	Pressure, kPa	Speed of sound, m/s
283.15	101.30	1352.7
283.15	10000.00	1398.5
283.15	20000.00	1442.3
283.15	30000.00	1483.7
283.15	40000.00	1522.5
283.15	50000.00	1558.3
283.15	60000.00	1593.9
283.15	70000.00	1627.0
283.15	80000.00	1658.8
283.15	90000.00	1689.9
283.15	100000.00	1720.7
283.15	110000.00	1753.7
283.15	120000.00	1781.4
283.15	130000.00	1808.5
283.15	140000.00	1834.6
283.15	150000.00	1860.3
283.15	170000.00	1908.7
283.15	190000.00	1951.8
283.15	210000.00	1998.0
303.15	101.30	1275.0
303.15	10000.00	1325.7
303.15	20000.00	1373.2
303.15	30000.00	1416.8
303.15	40000.00	1458.3
303.15	50000.00	1498.0
303.15	60000.00	1535.5
303.15	70000.00	1569.9
303.15	80000.00	1603.2
303.15	90000.00	1635.3
303.15	100000.00	1666.2

303.15	110000.00	1696.2
303.15	120000.00	1724.8
303.15	130000.00	1752.9
303.15	140000.00	1779.2
303.15	150000.00	1805.4
303.15	170000.00	1854.6
303.15	190000.00	1902.4
303.15	210000.00	1947.7
323.15	101.30	1203.1
323.15	10000.00	1258.2
323.15	20000.00	1309.5
323.15	30000.00	1355.9
323.15	40000.00	1399.1
323.15	50000.00	1439.4
323.15	60000.00	1478.4
323.15	70000.00	1515.1
323.15	80000.00	1550.3
323.15	90000.00	1583.7
323.15	100000.00	1615.7
323.15	110000.00	1645.8
323.15	120000.00	1676.7
323.15	130000.00	1705.7
323.15	140000.00	1733.7
323.15	150000.00	1760.3
323.15	170000.00	1811.6
323.15	190000.00	1861.2
323.15	210000.00	1909.8
343.15	101.30	1133.3
343.15	10000.00	1192.8
343.15	20000.00	1247.0
343.15	30000.00	1297.2
343.15	40000.00	1343.0
343.15	50000.00	1385.7
343.15	60000.00	1425.7
343.15	70000.00	1463.9
343.15	80000.00	1500.3
343.15	90000.00	1535.3
343.15	100000.00	1568.4
343.15	110000.00	1600.4
343.15	120000.00	1631.5
343.15	130000.00	1661.5
343.15	140000.00	1690.0
343.15	150000.00	1717.3
343.15	170000.00	1769.7

343.15	190000.00	1818.5
343.15	210000.00	1865.0
363.15	101.30	1065.9
363.15	10000.00	1130.1
363.15	20000.00	1188.5
363.15	30000.00	1241.2
363.15	40000.00	1289.6
363.15	50000.00	1334.7
363.15	60000.00	1376.5
363.15	70000.00	1415.4
363.15	80000.00	1452.8
363.15	90000.00	1488.9
363.15	100000.00	1522.8
363.15	110000.00	1556.0
363.15	120000.00	1586.9
363.15	130000.00	1617.1
363.15	140000.00	1646.6
363.15	150000.00	1675.1
363.15	170000.00	1727.6
363.15	190000.00	1777.0
363.15	210000.00	1824.5
383.15	101.30	1001.3
383.15	10000.00	1071.1
383.15	20000.00	1132.9
383.15	30000.00	1188.3
383.15	40000.00	1239.3
383.15	50000.00	1286.4
383.15	60000.00	1329.7
383.15	70000.00	1370.2
383.15	80000.00	1408.3
383.15	90000.00	1445.0
383.15	100000.00	1480.0
383.15	110000.00	1513.4
383.15	120000.00	1545.8
383.15	130000.00	1576.6
383.15	140000.00	1606.2
383.15	150000.00	1634.6
383.15	170000.00	1687.7
383.15	190000.00	1740.7
383.15	210000.00	1786.8
403.15	101.30	937.8
403.15	10000.00	1013.4
403.15	20000.00	1080.3
403.15	30000.00	1138.6

403.15	40000.00	1191.3
403.15	50000.00	1240.5
403.15	60000.00	1285.9
403.15	70000.00	1328.1
403.15	80000.00	1367.6
403.15	90000.00	1404.6
403.15	100000.00	1439.8
403.15	110000.00	1473.4
403.15	120000.00	1506.4
403.15	130000.00	1537.5
403.15	140000.00	1567.3
403.15	150000.00	1596.2
403.15	170000.00	1650.9
403.15	190000.00	1702.8
403.15	210000.00	1751.8

Reference

<https://www.doi.org/10.1021/je300405a>

Temperature, K	Pressure, kPa	Speed of sound, m/s
292.92	100.00	1313.79
292.91	15200.00	1389.41
292.90	30390.00	1453.47
292.90	45590.00	1511.65
292.90	60790.00	1565.94
292.90	75990.00	1616.66
292.91	91180.00	1664.29
292.90	101320.00	1693.93
298.18	100.00	1293.91
298.18	15200.00	1370.56
298.17	30390.00	1436.06
298.17	45590.00	1494.88
298.17	60790.00	1549.43
298.17	75990.00	1601.26
298.17	91180.00	1648.56
298.17	101320.00	1678.78
303.16	100.00	1275.23
303.17	15200.00	1353.08
303.16	30390.00	1419.13
303.16	45590.00	1479.56
303.16	60790.00	1534.66
303.16	75990.00	1586.89
303.16	91180.00	1634.96
303.16	101320.00	1665.86

308.14	100.00	1256.76
308.14	15200.00	1335.4
308.14	30390.00	1403.03
308.13	45590.00	1464.56
308.14	60790.00	1520.06
308.13	75990.00	1572.07
308.14	91180.00	1621.75
308.13	101320.00	1652.91
313.11	100.00	1238.5
313.11	15200.00	1318.7
313.10	30390.00	1387.45
313.09	45590.00	1449.78
313.10	60790.00	1506.18
313.09	75990.00	1559.16
313.09	91180.00	1608.6
313.09	101320.00	1638.96
318.28	100.00	1219.66
318.27	15200.00	1301.59
318.27	30390.00	1371.72
318.27	45590.00	1434.89
318.27	60790.00	1491.63
318.26	75990.00	1544.9
318.26	91180.00	1594.65
318.26	101320.00	1626.53

Reference

<https://www.doi.org/10.1021/je400157s>

Molar heat capacity at constant pressure, J/K/mol

Temperature, K - Liquid	Pressure, kPa - Liquid	Molar heat capacity at constant pressure, J/K/mol - Liquid
294.00	100.00	400.39
294.00	3080.00	399.98
294.00	6090.00	399.53
294.00	8970.00	399.07
294.00	12120.00	398.72
294.10	14870.00	398.28
294.10	17910.00	397.82
294.10	21090.00	397.38
294.10	24040.00	396.93
304.00	130.00	406.09
304.00	3030.00	405.62

304.00	6160.00	405.12
304.00	9030.00	404.66
304.00	11950.00	404.19
304.00	15090.00	403.69
304.00	17870.00	403.23
304.10	21100.00	402.75
304.10	24050.00	402.24
313.90	110.00	411.45
313.90	2920.00	410.92
313.90	5990.00	410.45
313.90	9080.00	409.95
314.00	11910.00	409.43
314.00	15030.00	408.93
314.00	18090.00	408.41
314.00	21080.00	407.89
314.00	24110.00	407.34
323.80	150.00	416.54
323.90	3040.00	416.03
323.90	5930.00	415.53
323.90	9070.00	415.03
323.90	11980.00	414.54
323.90	15050.00	414.03
324.00	18050.00	413.54
324.00	21210.00	413.06
324.00	24030.00	412.57
333.80	120.00	423.19
333.80	2960.00	422.70
333.80	5990.00	422.28
333.80	9040.00	421.77
333.90	12030.00	421.17
333.90	14940.00	420.66
333.90	18050.00	420.15
333.90	21100.00	419.65
334.00	24050.00	419.11
343.70	150.00	429.52
343.70	3000.00	429.02
343.70	6190.00	428.50
343.80	8990.00	427.96
343.80	12100.00	427.46
343.80	14910.00	426.93
343.80	17990.00	426.40
343.80	21010.00	426.07
343.90	23970.00	425.54
353.70	110.00	435.96

353.70	2980.00	435.41
353.70	6020.00	434.91
353.70	8990.00	434.40
353.80	11920.00	433.87
353.80	14940.00	433.36
353.80	17960.00	432.85
353.80	21070.00	432.33
353.90	23980.00	431.81

Reference

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Thermophysical properties of fatty acid methyl and ethyl esters:

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Ethyl Esters under High Pressure:

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Modeling of thermophysical properties of ethyl esters:

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<https://www.doi.org/10.1021/je100042c>

Methyl and Ethyl Esters: High Pressure Phase Equilibria of the CO₂/Saturated Ethyl Esters

<https://www.doi.org/10.1021/acs.jced.7b00780>

Homologous Series:

Legend

chl:	Standard liquid enthalpy of combustion
cpg:	Ideal gas heat capacity
cpl:	Liquid phase heat capacity
dvisc:	Dynamic viscosity
gf:	Standard Gibbs free energy of formation
hf:	Enthalpy of formation at standard conditions
hfl:	Liquid phase enthalpy of formation at standard conditions
hfus:	Enthalpy of fusion at standard conditions
hfust:	Enthalpy of fusion at a given temperature
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
pvap:	Vapor pressure
rfi:	Refractive Index
rho:	Liquid Density
rinpol:	Non-polar retention indices
ripol:	Polar retention indices
speedsl:	Speed of sound in fluid
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tcondl:	Liquid thermal conductivity
tf:	Normal melting (fusion) point
tt:	Triple Point Temperature
vc:	Critical Volume

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