Hexadecanoic acid, methyl ester

Other names:	Acide hexadecanoique methyl ester
	Emery 2216
	Metholene 2216
	Methyl hexadecanoate
	Methyl n-hexadecanoate
	Methyl palmitate
	Palmitic acid, methyl ester
	Radia 7120
	Uniphat A60
	n-Hexadecanoic acid methyl ester
Inchi:	InChI=1S/C17H34O2/c1-3-4-5-6-7-8-9-10-11-12-13-14-15-16-17(18)19-2/h3-16H2,1-2H3
InchiKey:	FLIACVVOZYBSBS-UHFFFAOYSA-N
Formula:	C17H34O2
SMILES:	CCCCCCCCCCCCCCCC(=O)OC
Mol. weight [g/mol]:	270.45
CAS:	112-39-0

Physical Properties

Property code	Value	Unit	Source
chl	-10107.00 ± 3.80	kJ/mol	NIST Webbook
chs	-10669.00 ± 0.40	kJ/mol	NIST Webbook
gf	-141.66	kJ/mol	Joback Method
hf	-639.01	kJ/mol	Joback Method
hfl	-1441.80 ± 3.80	kJ/mol	NIST Webbook
hfus	60.04	kJ/mol	Heat Capacity Measurements of 13 Methyl Esters of n-Carboxylic Acids from Methyloctanoate to Methyleicosanoate between 5 K and 350 K
hvap	96.80 ± 0.60	kJ/mol	NIST Webbook
hvap	93.20	kJ/mol	NIST Webbook
hvap	96.40	kJ/mol	NIST Webbook
log10ws	-5.80		Crippen Method
logp	5.641		Crippen Method
mcvol	257.830	ml/mol	McGowan Method
pc	1271.87	kPa	Joback Method
rinpol	1927.30		NIST Webbook

rinpol	1902.00	NIST Webbook
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ripol	2226.00		NIST Webbook
ripol	2204.00		NIST Webbook
ripol	2182.00		NIST Webbook
ripol	2226.00		NIST Webbook
ripol	2203.00		NIST Webbook
ss	495.09	J/mol×K	NIST Webbook
tb	664.65	K	Joback Method

tc	760.00	K	Vapor-liquid critical point measurements of fifteen compounds by the pulse-heating method
tf	302.00 ± 2.00	K	NIST Webbook
tf	302.74 ± 0.10	K	NIST Webbook
tf	303.05 ± 0.35	K	NIST Webbook
tf	304.00 ± 1.00	K	NIST Webbook
vc	1.012	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	816.25	J/mol×K	804.33	Joback Method
cpg	800.97	J/mol×K	776.39	Joback Method
cpg	784.95	J/mol×K	748.46	Joback Method
cpg	768.17	J/mol×K	720.52	Joback Method
cpg	750.62	J/mol×K	692.59	Joback Method
cpg	732.28	J/mol×K	664.65	Joback Method
cpg	830.80	J/mol×K	832.26	Joback Method
cps	474.47	J/mol×K	298.15	NIST Webbook
dvisc	0.0023360	Pa×s	333.15	Group Contribution Model for Predicting Viscosity of Fatty Compounds
dvisc	0.0017960	Pa×s	353.15	Densities and Viscosities of Fatty Acid Methyl and Ethyl Esters
dvisc	0.0016659	Pa×s	358.15	Densities and Viscosities of Fatty Acid Methyl and Ethyl Esters
dvisc	0.0015499	Pa×s	363.15	Densities and Viscosities of Fatty Acid Methyl and Ethyl Esters
dvisc	0.0037640	Pa×s	313.15	Group Contribution Model for Predicting Viscosity of Fatty Compounds

dvisc	0.0029310	Pa×s	323.15	Group Contribution Model for Predicting Viscosity of Fatty Compounds
dvisc	0.0022947	Pa×s	338.15	Densities and Viscosities of Fatty Acid Methyl and Ethyl Esters
dvisc	0.0019460	Pa×s	343.15	Group Contribution Model for Predicting Viscosity of Fatty Compounds
dvisc	0.0019421	Pa×s	348.15	Densities and Viscosities of Fatty Acid Methyl and Ethyl Esters
dvisc	0.0021073	Pa×s	343.15	Densities and Viscosities of Fatty Acid Methyl and Ethyl Esters
dvisc	0.0037551	Pa×s	313.15	Densities and Viscosities of Fatty Acid Methyl and Ethyl Esters
dvisc	0.0033682	Pa×s	318.15	Densities and Viscosities of Fatty Acid Methyl and Ethyl Esters
dvisc	0.0042122	Pa×s	308.15	Densities and Viscosities of Fatty Acid Methyl and Ethyl Esters
dvisc	0.0025083	Pa×s	333.15	Densities and Viscosities of Fatty Acid Methyl and Ethyl Esters
dvisc	0.0027540	Pa×s	328.15	Densities and Viscosities of Fatty Acid Methyl and Ethyl Esters
dvisc	0.0030378	Pa×s	323.15	Densities and Viscosities of Fatty Acid Methyl and Ethyl Esters
hfust	68.16	kJ/mol	307.20	NIST Webbook
hfust	14.97	kJ/mol	302.20	NIST Webbook
hfust	56.00	kJ/mol	305.20	NIST Webbook
hsubt	152.00 ± 2.00	kJ/mol	296.00	NIST Webbook
hvapt	71.40	kJ/mol	448.50	NIST Webbook
hvapt	82.60	kJ/mol	411.50	NIST Webbook
hvapt	82.40	kJ/mol	477.00	NIST Webbook
hvapt	78.20	kJ/mol	498.00	NIST Webbook
hvapt	83.30 ± 0.40	kJ/mol	397.00	NIST Webbook

hvapt	93.40	kJ/mol	350.00	NIST Webbook	
hvapt	96.20	kJ/mol	298.15	the vaporization enthaplies and vapor pressures of a series of unstaurated fatty acid methyl esters by correlation gas chromatography	
hvapt	101.80	kJ/mol	298.00	A Comparison of Results by Correlation Gas Chromatography with Another Gas Chromatographic Retention Time Technique. The Effects of Retention Time Coincidence on Vaporization Enthalpy and Vapor Pressure	
pvap	0.01	kPa	372.35	Experimental vapor pressures (from 1 Pa to 100 kPa) of six saturated Fatty Acid Methyl Esters (FAMEs): Methyl hexanoate, methyl octanoate, methyl decanoate, methyl dodecanoate, methyl tetradecanoate and methyl hexadecanoate	
pvap	0.62	kPa	440.15	Measurement and correlation of the density, viscosity and vapor pressure of fatty acid 2-ethyhexyl esters	
pvap	0.70	kPa	442.35	Measurement and correlation of the density, viscosity and vapor pressure of fatty acid 2-ethyhexyl esters	

pvap	0.77	kPa	444.15	Measurement and correlation of the density, viscosity and vapor pressure of fatty acid 2-ethyhexyl esters	
pvap	2.81e-05	kPa	308.12	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics	
pvap	4.57e-05	kPa	312.00	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics	
pvap	5.32e-05	kPa	312.96	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics	
pvap	4.82e-05	kPa	312.97	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics	
pvap	6.00e-05	kPa	314.42	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics	
pvap	6.90e-05	kPa	315.40	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics	

pvap	7.59e-05	kPa	316.85	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics
pvap	8.23e-05	kPa	317.81	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics
pvap	8.76e-05	kPa	317.82	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics
pvap	1.00e-04	kPa	319.27	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics
pvap	1.12e-04	kPa	320.26	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics
pvap	1.28e-04	kPa	321.71	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics
pvap	1.43e-04	kPa	322.66	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics

pvap	1.44e-04	kPa	322.67	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics
pvap	1.66e-04	kPa	324.12	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics
pvap	1.85e-04	kPa	325.11	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics
pvap	2.15e-04	kPa	326.56	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics
pvap	2.38e-04	kPa	327.52	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics
pvap	2.35e-04	kPa	327.52	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics
pvap	2.68e-04	kPa	328.98	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics

pvap	2.97e-04	kPa	329.96	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics
pvap	3.40e-04	kPa	331.42	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics
pvap	3.76e-04	kPa	332.37	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics
pvap	3.77e-04	kPa	332.37	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics
pvap	4.29e-04	kPa	333.83	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics
pvap	4.70e-04	kPa	334.83	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics
pvap	5.48e-04	kPa	336.28	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics

pvap	6.04e-04	kPa	337.23	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics
pvap	5.99e-04	kPa	337.23	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics
pvap	6.83e-04	kPa	338.69	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics
pvap	7.52e-04	kPa	339.69	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics
pvap	8.56e-04	kPa	341.14	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics
pvap	9.46e-04	kPa	342.09	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics
pvap	9.34e-04	kPa	342.09	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics

pvap	1.07e-03	kPa	343.55	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics
pvap	1.18e-03	kPa	344.55	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics
pvap	1.23e-03	kPa	345.01	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics
pvap	1.33e-03	kPa	346.00	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics
pvap	1.46e-03	kPa	346.95	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics
pvap	1.46e-03	kPa	346.95	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics
pvap	1.66e-03	kPa	348.41	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics

pvap	0.58	kPa	438.45	Measurement and correlation of the density, viscosity and vapor pressure of fatty acid 2-ethyhexyl esters	
pvap	1.89e-03	kPa	349.87	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics	
pvap	2.05e-03	kPa	350.86	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics	
pvap	2.26e-03	kPa	351.82	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics	
pvap	2.53e-03	kPa	353.27	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics	
pvap	2.77e-03	kPa	354.29	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics	
pvap	2.88e-03	kPa	354.73	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics	

pvap	3.11e-03	kPa	355.73	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics
pvap	3.41e-03	kPa	356.67	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics
pvap	3.81e-03	kPa	358.13	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics
pvap	4.17e-03	kPa	359.16	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics
pvap	4.33e-03	kPa	359.59	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics
pvap	4.29e-03	kPa	359.63	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics
pvap	4.67e-03	kPa	360.59	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics

pvap	5.11e-03	kPa	361.55	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics
pvap	5.65e-03	kPa	363.00	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics
pvap	6.17e-03	kPa	364.02	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics
pvap	6.38e-03	kPa	364.45	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics
pvap	6.32e-03	kPa	364.49	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics
pvap	6.84e-03	kPa	365.45	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics
pvap	7.47e-03	kPa	366.41	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics

pvap	8.23e-03	kPa	367.87	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics
pvap	8.93e-03	kPa	368.87	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics
pvap	9.21e-03	kPa	369.32	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics
pvap	0.01	kPa	371.29	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics
pvap	0.01	kPa	371.74	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics
pvap	0.01	kPa	372.64	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics
pvap	0.01	kPa	372.73	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics

pvap	4.00	kPa	486.57	Vapor liquid equilibrium of fatty acid ethyl esters determined using DSC	
pvap	0.13	kPa	407.12	Measurements and Correlations of the Density, Viscosity, and Vapor Pressure for Methyl Ricinoleate	
pvap	0.21	kPa	414.26	Measurements and Correlations of the Density, Viscosity, and Vapor Pressure for Methyl Ricinoleate	
pvap	0.24	kPa	418.18	Measurements and Correlations of the Density, Viscosity, and Vapor Pressure for Methyl Ricinoleate	
pvap	0.27	kPa	422.34	Measurements and Correlations of the Density, Viscosity, and Vapor Pressure for Methyl Ricinoleate	
pvap	0.30	kPa	424.68	Measurements and Correlations of the Density, Viscosity, and Vapor Pressure for Methyl Ricinoleate	
pvap	0.36	kPa	427.54	Measurements and Correlations of the Density, Viscosity, and Vapor Pressure for Methyl Ricinoleate	
pvap	0.41	kPa	429.32	Measurements and Correlations of the Density, Viscosity, and Vapor Pressure for Methyl Ricinoleate	
pvap	0.42	kPa	432.32	Measurements and Correlations of the Density, Viscosity, and Vapor Pressure for Methyl Ricinoleate	

pvap	0.52	kPa	434.18	Measurements and Correlations of the Density, Viscosity, and Vapor Pressure for Methyl Ricinoleate
pvap	0.55	kPa	437.30	Measurements and Correlations of the Density, Viscosity, and Vapor Pressure for Methyl Ricinoleate
pvap	0.56	kPa	438.44	Measurements and Correlations of the Density, Viscosity, and Vapor Pressure for Methyl Ricinoleate
pvap	0.65	kPa	439.60	Measurements and Correlations of the Density, Viscosity, and Vapor Pressure for Methyl Ricinoleate
pvap	0.66	kPa	441.00	Measurements and Correlations of the Density, Viscosity, and Vapor Pressure for Methyl Ricinoleate
pvap	0.84	kPa	445.36	Measurements and Correlations of the Density, Viscosity, and Vapor Pressure for Methyl Ricinoleate
pvap	0.85	kPa	447.06	Measurements and Correlations of the Density, Viscosity, and Vapor Pressure for Methyl Ricinoleate
pvap	0.02	kPa	373.15	Isothermal Vapor Pressures of Three Binary Systems: n-Tetradecane + Methyl Dodecanoate, Methyl Tetradecanoate, or Methyl Hexadecanoate between 353.15 and 453.15 K

pvap	0.03	kPa	383.15	Isothermal Vapor Pressures of Three Binary Systems: n-Tetradecane + Methyl Dodecanoate, Methyl Tetradecanoate, or Methyl Hexadecanoate between 353.15 and 453.15 K	
pvap	0.05	kPa	393.15	Isothermal Vapor Pressures of Three Binary Systems: n-Tetradecane + Methyl Dodecanoate, Methyl Tetradecanoate, or Methyl Hexadecanoate between 353.15 and 453.15 K	
pvap	0.10	kPa	403.15	Isothermal Vapor Pressures of Three Binary Systems: n-Tetradecane + Methyl Dodecanoate, Methyl Tetradecanoate, or Methyl Hexadecanoate between 353.15 and 453.15 K	
pvap	0.16	kPa	413.15	Isothermal Vapor Pressures of Three Binary Systems: n-Tetradecane + Methyl Dodecanoate, Methyl Tetradecanoate, or Methyl Hexadecanoate between 353.15 and 453.15 K	
pvap	0.28	kPa	423.15	Isothermal Vapor Pressures of Three Binary Systems: n-Tetradecane + Methyl Dodecanoate, Methyl Tetradecanoate, or Methyl Hexadecanoate between 353.15 and 453.15 K	

pvap	0.46	kPa	433.15	Isothermal Vapor Pressures of Three Binary Systems: n-Tetradecane + Methyl Dodecanoate, Methyl Tetradecanoate, or Methyl Hexadecanoate between 353.15 and 453.15 K
pvap	0.76	kPa	443.15	Isothermal Vapor Pressures of Three Binary Systems: n-Tetradecane + Methyl Dodecanoate, Methyl Tetradecanoate, or Methyl Hexadecanoate between 353.15 and 453.15 K
pvap	0.53	kPa	436.25	Measurement and correlation of the density, viscosity and vapor pressure of fatty acid 2-ethyhexyl esters
pvap	0.10	kPa	408.30	Isobaric Vapor Liquid Equilibrium of the Mixture of Methyl Palmitate and Methyl Stearate at 0.1 kPa, 1 kPa, 5 kPa, and 10 kPa
pvap	1.00	kPa	450.90	Isobaric Vapor Liquid Equilibrium of the Mixture of Methyl Palmitate and Methyl Stearate at 0.1 kPa, 1 kPa, 5 kPa, and 10 kPa
pvap	5.00	kPa	490.80	Isobaric Vapor Liquid Equilibrium of the Mixture of Methyl Palmitate and Methyl Stearate at 0.1 kPa, 1 kPa, 5 kPa, and 10 kPa

pvap	10.00	kPa	511.25	Isobaric Vapor Liquid Equilibrium of the Mixture of Methyl Palmitate and Methyl Stearate at 0.1 kPa, 1 kPa, 5 kPa, and 10 kPa	
pvap	0.45	kPa	433.35	Measurement and correlation of the density, viscosity and vapor pressure of fatty acid 2-ethyhexyl esters	
pvap	0.42	kPa	432.25	Measurement and correlation of the density, viscosity and vapor pressure of fatty acid 2-ethyhexyl esters	
pvap	0.40	kPa	430.75	Measurement and correlation of the density, viscosity and vapor pressure of fatty acid 2-ethyhexyl esters	
pvap	0.35	kPa	428.35	Measurement and correlation of the density, viscosity and vapor pressure of fatty acid 2-ethyhexyl esters	
pvap	0.31	kPa	425.25	Measurement and correlation of the density, viscosity and vapor pressure of fatty acid 2-ethyhexyl esters	
pvap	0.28	kPa	423.15	Measurement and correlation of the density, viscosity and vapor pressure of fatty acid 2-ethyhexyl esters	

pvap	0.21	kPa	419.15	Measurement and correlation of the density, viscosity and vapor pressure of fatty acid 2-ethyhexyl esters
pvap	1.20	kPa	452.65	Experimental vapor pressures (from 1 Pa to 100 kPa) of six saturated Fatty Acid Methyl Esters (FAMEs): Methyl hexanoate, methyl octanoate, methyl decanoate, methyl dodecanoate, methyl tetradecanoate and methyl hexadecanoate
pvap	0.73	kPa	442.67	Experimental vapor pressures (from 1 Pa to 100 kPa) of six saturated Fatty Acid Methyl Esters (FAMEs): Methyl hexanoate, methyl octanoate, methyl decanoate, methyl dodecanoate, methyl tetradecanoate and methyl hexadecanoate
pvap	0.45	kPa	432.68	Experimental vapor pressures (from 1 Pa to 100 kPa) of six saturated Fatty Acid Methyl Esters (FAMEs): Methyl hexanoate, methyl octanoate, methyl decanoate, methyl dodecanoate, methyl tetradecanoate and methyl hexadecanoate

pvap	0.27	kPa	422.44	Experimental vapor pressures (from 1 Pa to 100 kPa) of six saturated Fatty Acid Methyl Esters (FAMEs): Methyl hexanoate, methyl octanoate, methyl decanoate, methyl dodecanoate, methyl tetradecanoate and methyl hexadecanoate
pvap	0.16	kPa	412.54	Experimental vapor pressures (from 1 Pa to 100 kPa) of six saturated Fatty Acid Methyl Esters (FAMEs): Methyl hexanoate, methyl octanoate, methyl decanoate, methyl dodecanoate, methyl tetradecanoate and methyl hexadecanoate
pvap	0.09	kPa	402.41	Experimental vapor pressures (from 1 Pa to 100 kPa) of six saturated Fatty Acid Methyl Esters (FAMEs): Methyl hexanoate, methyl octanoate, methyl decanoate, methyl dodecanoate, methyl tetradecanoate and methyl hexadecanoate

pvap	0.05	kPa	392.48	Experimental vapor pressures (from 1 Pa to 100 kPa) of six saturated Fatty Acid Methyl Esters (FAMEs): Methyl hexanoate, methyl octanoate, methyl decanoate, methyl dodecanoate, methyl tetradecanoate and methyl hexadecanoate	
pvap	1.21	kPa	453.15	Isothermal Vapor Pressures of Three Binary Systems: n-Tetradecane + Methyl Dodecanoate, Methyl Tetradecanoate, or Methyl Hexadecanoate between 353.15 and 453.15 K	
pvap	1.82e-03	kPa	349.41	Fatty acids methyl esters: Complementary measurements and comprehensive analysis of vaporization thermodynamics	
pvap	0.03	kPa	382.55	Experimental vapor pressures (from 1 Pa to 100 kPa) of six saturated Fatty Acid Methyl Esters (FAMEs): Methyl hexanoate, methyl octanoate, methyl decanoate, methyl dodecanoate, methyl tetradecanoate and methyl hexadecanoate	

speedsl	1250.00	m/s	333.15	Density and Speed of Sound Measurements on Five Fatty Acid Methyl Esters at 83 kPa and Temperatures from (278.15 to 338.15) K	
speedsl	1268.00	m/s	328.15	Density and Speed of Sound Measurements on Five Fatty Acid Methyl Esters at 83 kPa and Temperatures from (278.15 to 338.15) K	
speedsl	1285.00	m/s	323.15	Density and Speed of Sound Measurements on Five Fatty Acid Methyl Esters at 83 kPa and Temperatures from (278.15 to 338.15) K	
speedsl	1303.00	m/s	318.15	Density and Speed of Sound Measurements on Five Fatty Acid Methyl Esters at 83 kPa and Temperatures from (278.15 to 338.15) K	
speedsl	1320.00	m/s	313.15	Density and Speed of Sound Measurements on Five Fatty Acid Methyl Esters at 83 kPa and Temperatures from (278.15 to 338.15) K	
speedsl	1338.00	m/s	308.15	Density and Speed of Sound Measurements on Five Fatty Acid Methyl Esters at 83 kPa and Temperatures from (278.15 to 338.15) K	

speedsl	1233.00	m/s	338.15	Density and Speed of Sound Measurements on Five Fatty Acid Methyl Esters at 83 kPa and Temperatures from (278.15 to 338.15) K

Pressure Dependent Properties

Property code	Value	Unit	Pressure [kPa]	Source
tbrp	436.70	K	0.50	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.50314e+01
Coeff. B	-5.16468e+03
Coeff. C	-1.09270e+02
Temperature range (K), min.	459.57
Temperature range (K), max.	640.62

Datasets

Speed of sound, m/s

Pressure, kPa - Liquid	Temperature, K - Liquid	Speed of sound, m/s - Liquid
100.00	313.15	1317.2
10000.00	313.15	1365.4
20000.00	313.15	1411.5
30000.00	313.15	1454.4

40000.00	313.15	1494.8
100.00	323.15	1283.4
10000.00	323.15	1333.7
20000.00	323.15	1381.1
30000.00	323.15	1425.2
40000.00	323.15	1467.4
50000.00	323.15	1506.9
100.00	343.15	1215.3
10000.00	343.15	1270.1
20000.00	343.15	1319.7
30000.00	343.15	1366.8
40000.00	343.15	1410.5
50000.00	343.15	1450.6
100.00	363.15	1150.1
10000.00	363.15	1208.9
20000.00	363.15	1262.5
30000.00	363.15	1311.1
40000.00	363.15	1355.7
50000.00	363.15	1400.9
100.00	383.15	1087.2
10000.00	383.15	1150.3
20000.00	383.15	1207.5
30000.00	383.15	1259.3
40000.00	383.15	1310.8
50000.00	383.15	1358.3
100.00	393.15	1056.9
10000.00	393.15	1121.2
20000.00	393.15	1180.4
30000.00	393.15	1234.2
40000.00	393.15	1284.7
50000.00	393.15	1334.0

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Isobaric vapor liquid equilibrium for binary system of methyl myristate + methyl palmitate at 0.5, 1.0 and 1.4 kPa:	https://www.doi.org/10.1016/j.fluid.2014.09.006
Isothermal Vapor Pressures of Three Binary Systems: n-Tetradecane + Methyl Dodecanoate, Methyl Tetradecanoate, or Methyl Hexadecanoate between 353.15 and 453.15K:	https://www.doi.org/10.1021/acs.jced.7b00099
Tar removal from biosyngas in the biomass gasification process. (Liquid + liquid) equilibrium (water + solvent (paraxylene and methyl hexadecanoate) + model molecules of tar (benzene, toluene, phenol)}:	https://www.doi.org/10.1016/j.jct.2011.12.009

Phase behaviour of high molecular mass methyl esters in supercritical ethane:	https://www.doi.org/10.1016/j.fluid.2011.08.015
Speed of Sound, Density, and Derivative Properties of Ethyl Myristate, Methyl Myristate, and Methyl Palmitate under High Pressure	https://www.doi.org/10.1021/je400122k
Experimental vapor pressures (from 1 Pa to 100 kPa) of six saturated Fatty Acid Methyl Esters (FAMES): Methyl Hexadecanoate, Methyl Octadecanoate, Methyl Decanoate, Methyl Dodecanoate, Methyl Tetradecanoate, and Methyl Eicosanoate	https://www.doi.org/10.1016/j.jct.2016.07.024
Density and Viscosity of Fatty Acid Methyl and Ethyl Esters	https://www.doi.org/10.1021/je100042c
Vapor Liquid Equilibrium for Methanol + Methyl Palmitate near the Critical Region: Ternary Mixing Behavior of Methanol + Methyl Hexadecanoate + Methyl Hexadecanoate	https://www.doi.org/10.1021/acs.jced.5b00865
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Legend

chl:	Standard liquid enthalpy of combustion
chs:	Standard solid enthalpy of combustion
cpg:	Ideal gas heat capacity
cps:	Solid 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
hsubt:	Enthalpy of sublimation 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
rinpol:	Non-polar retention indices
ripol:	Polar retention indices
speedsl:	Speed of sound in fluid
ss:	Solid phase molar entropy at standard conditions
tb:	Normal Boiling Point Temperature
tbrp:	Boiling point at reduced pressure
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume