

2-Ethylhexyl palmitate

Other names:	2-ethylhexyl hexadecanoate Octyl palmitate
Inchi:	InChI=1S/C24H48O2/c1-4-7-9-10-11-12-13-14-15-16-17-18-19-21-24(25)26-22-23(6-3)2
InchiKey:	SFAAOBGYWOUHLU-UHFFFAOYSA-N
Formula:	C24H48O2
SMILES:	CCCCCCCCCCCCCCCC(=O)OCC(CC)CCCC
Mol. weight [g/mol]:	368.64
CAS:	29806-73-3

Physical Properties

Property code	Value	Unit	Source
gf	-85.16	kJ/mol	Joback Method
hf	-788.77	kJ/mol	Joback Method
hfus	57.18	kJ/mol	Joback Method
hvap	77.79	kJ/mol	Joback Method
log10ws	-8.49		Crippen Method
logp	8.227		Crippen Method
mcvol	356.460	ml/mol	McGowan Method
pc	831.46	kPa	Joback Method
rinpol	2479.00		NIST Webbook
rinpol	2560.00		NIST Webbook
rinpol	2479.00		NIST Webbook
tb	824.37	K	Joback Method
tc	1009.38	K	Joback Method
tf	417.40	K	Joback Method
vc	1.397	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	1270.38	J/mol×K	1009.38	Joback Method
cpg	1178.90	J/mol×K	855.21	Joback Method
cpg	1199.39	J/mol×K	886.04	Joback Method
cpg	1218.75	J/mol×K	916.88	Joback Method

cpg	1237.01	J/mol×K	947.71	Joback Method
cpg	1254.21	J/mol×K	978.55	Joback Method
cpg	1157.23	J/mol×K	824.37	Joback Method
dvisc	0.0000530	Pa×s	756.54	Joback Method
dvisc	0.0000781	Pa×s	688.71	Joback Method
dvisc	0.0001252	Pa×s	620.88	Joback Method
dvisc	0.0002254	Pa×s	553.06	Joback Method
dvisc	0.0004783	Pa×s	485.23	Joback Method
dvisc	0.0000384	Pa×s	824.37	Joback Method
dvisc	0.0012961	Pa×s	417.40	Joback Method
rho1	834.00	kg/m3	328.15	Measurement and correlation of the density, viscosity and vapor pressure of fatty acid 2-ethyhexyl esters
rho1	826.70	kg/m3	338.15	Measurement and correlation of the density, viscosity and vapor pressure of fatty acid 2-ethyhexyl esters
rho1	823.30	kg/m3	343.15	Measurement and correlation of the density, viscosity and vapor pressure of fatty acid 2-ethyhexyl esters
rho1	820.10	kg/m3	348.15	Measurement and correlation of the density, viscosity and vapor pressure of fatty acid 2-ethyhexyl esters
rho1	816.80	kg/m3	353.15	Measurement and correlation of the density, viscosity and vapor pressure of fatty acid 2-ethyhexyl esters
rho1	813.20	kg/m3	358.15	Measurement and correlation of the density, viscosity and vapor pressure of fatty acid 2-ethyhexyl esters

rhoI	810.00	kg/m3	363.15	Measurement and correlation of the density, viscosity and vapor pressure of fatty acid 2-ethyhexyl esters
rhoI	806.90	kg/m3	368.15	Measurement and correlation of the density, viscosity and vapor pressure of fatty acid 2-ethyhexyl esters
rhoI	837.40	kg/m3	323.15	Measurement and correlation of the density, viscosity and vapor pressure of fatty acid 2-ethyhexyl esters
rhoI	840.90	kg/m3	318.15	Measurement and correlation of the density, viscosity and vapor pressure of fatty acid 2-ethyhexyl esters
rhoI	844.50	kg/m3	313.15	Measurement and correlation of the density, viscosity and vapor pressure of fatty acid 2-ethyhexyl esters
rhoI	847.90	kg/m3	308.15	Measurement and correlation of the density, viscosity and vapor pressure of fatty acid 2-ethyhexyl esters
rhoI	851.00	kg/m3	303.15	Measurement and correlation of the density, viscosity and vapor pressure of fatty acid 2-ethyhexyl esters

rho1	855.10	kg/m3	298.15	Measurement and correlation of the density, viscosity and vapor pressure of fatty acid 2-ethyhexyl esters
rho1	830.30	kg/m3	333.15	Measurement and correlation of the density, viscosity and vapor pressure of fatty acid 2-ethyhexyl esters

Sources

Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
Measurement and correlation of the density, viscosity and vapor pressure of fatty acid 2-ethyhexyl esters:	https://www.doi.org/10.1016/j.jct.2018.10.012
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=C29806733&Units=SI

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
rho1:	Liquid Density
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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