

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:	CCCCCCCCCCCCCCC(=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	2560.00		NIST Webbook
rinpol	2479.00		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	0.0012961	Paxs	417.40	Joback Method
dvisc	0.0004783	Paxs	485.23	Joback Method
dvisc	0.0002254	Paxs	553.06	Joback Method
dvisc	0.0001252	Paxs	620.88	Joback Method
dvisc	0.0000781	Paxs	688.71	Joback Method
dvisc	0.0000530	Paxs	756.54	Joback Method
dvisc	0.0000384	Paxs	824.37	Joback Method
rhol	806.90	kg/m3	368.15	Measurement and correlation of the density, viscosity and vapor pressure of fatty acid 2-ethylhexyl esters
rhol	810.00	kg/m3	363.15	Measurement and correlation of the density, viscosity and vapor pressure of fatty acid 2-ethylhexyl esters
rhol	813.20	kg/m3	358.15	Measurement and correlation of the density, viscosity and vapor pressure of fatty acid 2-ethylhexyl esters
rhol	816.80	kg/m3	353.15	Measurement and correlation of the density, viscosity and vapor pressure of fatty acid 2-ethylhexyl esters
rhol	820.10	kg/m3	348.15	Measurement and correlation of the density, viscosity and vapor pressure of fatty acid 2-ethylhexyl esters
rhol	823.30	kg/m3	343.15	Measurement and correlation of the density, viscosity and vapor pressure of fatty acid 2-ethylhexyl esters

rhol	826.70	kg/m3	338.15	Measurement and correlation of the density, viscosity and vapor pressure of fatty acid 2-ethylhexyl esters
rhol	830.30	kg/m3	333.15	Measurement and correlation of the density, viscosity and vapor pressure of fatty acid 2-ethylhexyl esters
rhol	834.00	kg/m3	328.15	Measurement and correlation of the density, viscosity and vapor pressure of fatty acid 2-ethylhexyl esters
rhol	837.40	kg/m3	323.15	Measurement and correlation of the density, viscosity and vapor pressure of fatty acid 2-ethylhexyl esters
rhol	840.90	kg/m3	318.15	Measurement and correlation of the density, viscosity and vapor pressure of fatty acid 2-ethylhexyl esters
rhol	844.50	kg/m3	313.15	Measurement and correlation of the density, viscosity and vapor pressure of fatty acid 2-ethylhexyl esters
rhol	847.90	kg/m3	308.15	Measurement and correlation of the density, viscosity and vapor pressure of fatty acid 2-ethylhexyl esters

rhol	851.00	kg/m3	303.15	Measurement and correlation of the density, viscosity and vapor pressure of fatty acid 2-ethylhexyl esters
rhol	855.10	kg/m3	298.15	Measurement and correlation of the density, viscosity and vapor pressure of fatty acid 2-ethylhexyl esters

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C29806733&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci9903071
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
Measurement and correlation of the density, viscosity and vapor pressure of fatty acid 2-ethylhexyl esters:	https://www.doi.org/10.1016/j.jct.2018.10.012
McGowan Method:	https://en.wikipedia.org/wiki/Joback_method
McGowan Method:	http://link.springer.com/article/10.1007/BF02311772

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
rhol:	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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