2-Ethylhexyl acrylate

Other names:	1-Hexanol, 2-ethyl-, acrylate
	2-Ethyl-1-hexyl acrylate
	2-Ethylhexanol acrylate
	2-Ethylhexyl 2-propenoate
	2-Ethylhexyl ester of acrylic acid
	2-Ethylhexylester kyseliny akrylove
	2-Propenoic acid, 2-ethylhexyl ester
	2-ethylhexyl propenoate
	2EHA
	Acrylic acid, 2-ethylhexyl ester
	NSC 4803
	ethylhexyl acrylate
	propenoic acid, 2-ethylhexyl ester
Inchi:	InChI=1S/C11H20O2/c1-4-7-8-10(5-2)9-13-11(12)6-3/h6,10H,3-5,7-9H2,1-2H3
InchiKey:	GOXQRTZXKQZDDN-UHFFFAOYSA-N
Formula:	C11H20O2
SMILES:	C=CC(=O)OCC(CC)CCCC
Mol. weight [g/mol]:	184.28
CAS:	103-11-7

Physical Properties

Property code	Value	Unit	Source
gf	-106.78	kJ/mol	Joback Method
hf	-395.02	kJ/mol	Joback Method
hfus	22.23	kJ/mol	Joback Method
hvap	48.18	kJ/mol	Joback Method
log10ws	-2.90		Crippen Method
logp	2.932		Crippen Method
mcvol	168.990	ml/mol	McGowan Method
pc	2108.07	kPa	Joback Method
rinpol	1215.00		NIST Webbook
rinpol	1224.00		NIST Webbook
rinpol	1224.00		NIST Webbook
rinpol	1192.00		NIST Webbook
rinpol	1220.00		NIST Webbook
rinpol	1215.00		NIST Webbook
ripol	1494.00		NIST Webbook

ripol	1500.00		NIST Webbook
ripol	1495.00		NIST Webbook
tb	490.20	K	NIST Webbook
tc	701.05	K	Joback Method
tf	269.13	K	Joback Method
vc	0.650	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	396.43	J/mol×K	523.61	Joback Method
cpg	411.21	J/mol×K	553.18	Joback Method
cpg	425.37	J/mol×K	582.76	Joback Method
cpg	438.94	J/mol×K	612.33	Joback Method
cpg	451.91	J/mol×K	641.90	Joback Method
cpg	464.30	J/mol×K	671.47	Joback Method
cpg	476.13	J/mol×K	701.05	Joback Method
dvisc	0.0041707	Pa×s	269.13	Joback Method
dvisc	0.0017765	Pa×s	311.54	Joback Method
dvisc	0.0009284	Pa×s	353.96	Joback Method
dvisc	0.0005575	Pa×s	396.37	Joback Method
dvisc	0.0003694	Pa×s	438.78	Joback Method
dvisc	0.0002632	Pa×s	481.20	Joback Method
dvisc	0.0001982	Pa×s	523.61	Joback Method
hvapt	55.30	kJ/mol	406.00	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/T + C*ln(T) + D*T^2
Coeff. A	6.19057e+01
Coeff. B	-8.53516e+03
Coeff. C	-6.54285e+00
Coeff. D	2.78538e-06
Temperature range (K), min.	183.15
Temperature range (K), max.	655.00

Sources

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=C103117&Units=SI
KDB Vapor Pressure Data:	https://www.cheric.org/research/kdb/hcprop/showprop.php?cmpid=1187
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
Ultrasonic velocities, densities, and excess molar volumes of binary mixtures of N,N-dimethyl formamide with methyl acrylate, or ethyl acrylate, or butyl acrylate, or 2-ethyl hexyl acrylate at T = 308.15 K:	https://www.doi.org/10.1016/j.jct.2011.06.011

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
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
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume