Dodecyl acrylate

Other names:	2-Propenoic acid, dodecyl ester
	2-Propenoic acid, n-dodecyl ester
	Acrylic acid, dodecyl ester
	Ageflex FA-12
	Lauryl acrylate
	NSC 24177
	SR 335
	n-Dodecyl acrylate
	n-Lauryl acrylate
	n-Lauryl acrylate (monomer)
Inchi:	InChI=1S/C15H28O2/c1-3-5-6-7-8-9-10-11-12-13-14-17-15(16)4-2/h4H,2-3,5-14H2,1H3
InchiKey:	PBOSTUDLECTMNL-UHFFFAOYSA-N
Formula:	C15H28O2
SMILES:	C=CC(=O)OCCCCCCCCCCCC
Mol. weight [g/mol]:	240.38
CAS:	2156-97-0

Physical Properties

Property code	Value	Unit	Source
gf	-70.66	kJ/mol	Joback Method
hf	-472.30	kJ/mol	Joback Method
hfus	36.11	kJ/mol	Joback Method
hvap	57.47	kJ/mol	Joback Method
log10ws	-4.82		Crippen Method
logp	4.636		Crippen Method
mcvol	225.350	ml/mol	McGowan Method
pc	1514.03	kPa	Joback Method
rinpol	1675.00		NIST Webbook
rinpol	1675.00		NIST Webbook
ripol	1996.00		NIST Webbook
ripol	1996.00		NIST Webbook
tb	615.57	K	Joback Method
tc	785.30	K	Joback Method
tf	329.21	K	Joback Method
vc	0.880	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	598.68	J/mol×K	615.57	Joback Method
cpg	615.61	J/mol×K	643.86	Joback Method
cpg	631.81	J/mol×K	672.15	Joback Method
cpg	647.30	J/mol×K	700.44	Joback Method
cpg	662.10	J/mol×K	728.72	Joback Method
cpg	676.23	J/mol×K	757.01	Joback Method
cpg	689.70	J/mol×K	785.30	Joback Method
dvisc	0.0025018	Pa×s	329.21	Joback Method
dvisc	0.0011478	Pa×s	376.94	Joback Method
dvisc	0.0006273	Pa×s	424.66	Joback Method
dvisc	0.0003874	Pa×s	472.39	Joback Method
dvisc	0.0002614	Pa×s	520.12	Joback Method
dvisc	0.0001884	Pa×s	567.84	Joback Method
dvisc	0.0001429	Pa×s	615.57	Joback Method
hvapt	64.60	kJ/mol	502.50	NIST Webbook

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C2156970&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
Cloud-Point and Vapor-Liquid Behavior of Binary and Ternary Systems for the Poly(dodecyl acrylate) + Cosolvent and Dodecyl Acrylate in Supercritical Solvents:	https://www.doi.org/10.1021/je100234f
Joback 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

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
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