

Octadecyl acrylate

Other names:	2-Propenoic acid, octadecyl ester Propenoic acid, octadecyl ester
Inchi:	InChI=1S/C21H40O2/c1-3-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-20-23-21(22)4-2/h
InchiKey:	FSAJWMJJORKPKS-UHFFFAOYSA-N
Formula:	C21H40O2
SMILES:	<chem>C=CC(=O)OCCCCCCCCCCCCCCCCCC</chem>
Mol. weight [g/mol]:	324.54
CAS:	4813-57-4

Physical Properties

Property code	Value	Unit	Source
gf	-20.14	kJ/mol	Joback Method
hf	-596.14	kJ/mol	Joback Method
hfus	51.65	kJ/mol	Joback Method
hvap	70.83	kJ/mol	Joback Method
log10ws	-7.33		Crippen Method
logp	6.977		Crippen Method
mvol	309.890	ml/mol	McGowan Method
pc	1010.37	kPa	Joback Method
rinpol	2278.00		NIST Webbook
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tb	752.85	K	Joback Method
tc	926.96	K	Joback Method
tf	396.83	K	Joback Method
vc	1.216	m ³ /kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	943.33	J/mol×K	752.85	Joback Method
cpg	1032.03	J/mol×K	897.94	Joback Method
cpg	1016.06	J/mol×K	868.93	Joback Method
cpg	999.24	J/mol×K	839.91	Joback Method
cpg	981.53	J/mol×K	810.89	Joback Method

cpg	962.90	J/mol×K	781.87	Joback Method
cpg	1047.16	J/mol×K	926.96	Joback Method
dvisc	0.0000679	Paxs	752.85	Joback Method
dvisc	0.0000912	Paxs	693.51	Joback Method
dvisc	0.0001293	Paxs	634.18	Joback Method
dvisc	0.0001972	Paxs	574.84	Joback Method
dvisc	0.0003313	Paxs	515.50	Joback Method
dvisc	0.0006370	Paxs	456.17	Joback Method
dvisc	0.0014892	Paxs	396.83	Joback Method

Sources

McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C4813574&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci9903071
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
Joback Method:	https://en.wikipedia.org/wiki/Joback_method

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
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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