

Decyl acrylate

Inchi:	InChI=1S/C13H24O2/c1-3-5-6-7-8-9-10-11-12-15-13(14)4-2/h4H,2-3,5-12H2,1H3
InchiKey:	FWLDHHJLVGRRHD-UHFFFAOYSA-N
Formula:	C13H24O2
SMILES:	C=CC(=O)OCCCCCCCCC
Mol. weight [g/mol]:	212.33
CAS:	2156-96-9

Physical Properties

Property code	Value	Unit	Source
gf	-87.50	kJ/mol	Joback Method
hf	-431.02	kJ/mol	Joback Method
hfus	30.93	kJ/mol	Joback Method
hvap	53.02	kJ/mol	Joback Method
log10ws	-3.98		Crippen Method
logp	3.856		Crippen Method
mcvol	197.170	ml/mol	McGowan Method
pc	1768.38	kPa	Joback Method
rinpol	1493.00		NIST Webbook
rinpol	1493.00		NIST Webbook
rinpol	1474.00		NIST Webbook
rinpol	1474.00		NIST Webbook
rinpol	1493.00		NIST Webbook
ripol	1789.00		NIST Webbook
ripol	1789.00		NIST Webbook
ripol	1795.00		NIST Webbook
tb	569.81	K	Joback Method
tc	741.25	K	Joback Method
tf	306.67	K	Joback Method
vc	0.768	m ³ /kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	494.21	J/mol×K	569.81	Joback Method

cpg	510.03	J/molxK	598.38	Joback Method
cpg	525.18	J/molxK	626.96	Joback Method
cpg	539.69	J/molxK	655.53	Joback Method
cpg	553.58	J/molxK	684.10	Joback Method
cpg	566.84	J/molxK	712.68	Joback Method
cpg	579.50	J/molxK	741.25	Joback Method
dvisc	0.0027987	Paxs	306.67	Joback Method
dvisc	0.0013224	Paxs	350.53	Joback Method
dvisc	0.0007382	Paxs	394.38	Joback Method
dvisc	0.0004631	Paxs	438.24	Joback Method
dvisc	0.0003162	Paxs	482.10	Joback Method
dvisc	0.0002301	Paxs	525.95	Joback Method
dvisc	0.0001759	Paxs	569.81	Joback Method
hvapt	59.60	kJ/mol	470.00	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
Coeff. A	1.56693e+01
Coeff. B	-4.91451e+03
Coeff. C	-9.06170e+01
Temperature range (K), min.	410.12
Temperature range (K), max.	565.09

Sources

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
McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C2156969&Units=SI
The Yaws Handbook of Vapor Pressure:	https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure

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

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