n-Dodecyl methacrylate

Other names:	1-Dodecanol methacrylate
	1-Dodecyl methacrylate
	2-Propenoic acid, 2-methyl-, dodecyl ester
	Acrylic acid, 2-methyl-, dodecyl ester
	Ageflex FM 246
	Ageflex FM-12
	Dodecyl 2-methyl-2-propenoate
	Dodecyl ester of 2-methyl-2-propenoic acid
	Dodecyl methacrylate
	GE 410
	GE 410 (methacrylate)
	LAMA
	Lauryl methacrylate
	Laurylester kyseliny methakrylove
	Metazene
	Methacrylic acid, dodecyl ester
	Methacrylic acid, lauryl ester
	Methyl-2-propenoic acid, dodecyl ester
	NSC 5188
	Propenoic acid, 2-methyl-, dodecyl ester
	SR 313
	Sipomer LMA
	n-Lauryl methacrylate
Inchi:	InChI=1S/C16H30O2/c1-4-5-6-7-8-9-10-11-12-13-14-18-16(17)15(2)3/h2,4-14H2,1,3H3
InchiKey:	GMSCBRSQMRDRCD-UHFFFAOYSA-N
Formula:	C16H30O2
SMILES:	C=C(C)C(=O)OCCCCCCCCCCCC
Mol. weight [g/mol]:	254.41
CAS:	142-90-5

Physical Properties

Property code	Value	Unit	Source
gf	-70.79	kJ/mol	Joback Method
hf	-502.73	kJ/mol	Joback Method
hfus	37.39	kJ/mol	Joback Method
hvap	59.78	kJ/mol	Joback Method

log10ws	-5.24		Crippen Method
logp	5.027		Crippen Method
mcvol	239.440	ml/mol	McGowan Method
pc	1412.25	kPa	Joback Method
rinpol	1756.00		NIST Webbook
rinpol	1775.00		NIST Webbook
rinpol	1775.00		NIST Webbook
rinpol	1756.00		NIST Webbook
ripol	2042.00		NIST Webbook
ripol	2042.00		NIST Webbook
tb	638.33	K	Joback Method
tc	809.67	K	Joback Method
tf	326.52	K	Joback Method
vc	0.938	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	733.22	J/mol×K	781.12	Joback Method
cpg	652.81	J/mol×K	638.33	Joback Method
cpg	670.39	J/mol×K	666.89	Joback Method
cpg	687.21	J/mol×K	695.44	Joback Method
cpg	703.28	J/mol×K	724.00	Joback Method
cpg	718.61	J/mol×K	752.56	Joback Method
cpg	747.14	J/mol×K	809.67	Joback Method
hvapt	64.90	kJ/mol	509.00	NIST Webbook

Pressure Dependent Properties

Property code	Value	Unit	Pressure [kPa]	Source
tbrp	415.20	K	0.50	NIST Webbook

Correlations

Information	Value

Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.56061e+01
Coeff. B	-5.25286e+03
Coeff. C	-1.02710e+02
Temperature range (K), min.	445.62
Temperature range (K), max.	612.96

Sources

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=C142905&Units=SI
The Yaws Handbook of Vapor Pressure:	https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l

Legend

cpg:	Ideal gas heat capacity
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
tbrp:	Boiling point at reduced pressure
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume