4-Decenoic acid, 3-methyl-, (E)-

Other names: (E)-3-Methyldec-4-enoic acid
Inchi: InChI=1S/C11H20O2/c1-3-4-5-6-7-8-10(2)9-11(12)13/h7-8,10H,3-6,9H2,1-2H3,(H,12,13)
InchiKey: WZZXDQPNKLAUNI-BQYQJAHWSA-N
Formula: C11H20O2
SMILES: CCCCCC=CC(C)CC(=O)O
Mol. weight [g/mol]: 184.28
CAS: 22882-86-6

Physical Properties

Property code	Value	Unit	Source
gf	-146.22	kJ/mol	Joback Method
hf	-423.24	kJ/mol	Joback Method
hfus	26.61	kJ/mol	Joback Method
hvap	63.08	kJ/mol	Joback Method
log10ws	-3.14		Crippen Method
logp	3.234		Crippen Method
mcvol	168.990	ml/mol	McGowan Method
pc	2358.78	kPa	Joback Method
rinpol	1388.40		NIST Webbook
rinpol	1388.40		NIST Webbook
tb	600.85	K	Joback Method
tc	775.71	K	Joback Method
tf	304.40	K	Joback Method
vc	0.650	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	432.27	J/mol×K	600.85	Joback Method
cpg	445.15	J/mol×K	629.99	Joback Method
cpg	457.44	J/mol×K	659.14	Joback Method
cpg	469.13	J/mol×K	688.28	Joback Method
cpg	480.28	J/mol×K	717.43	Joback Method
cpg	490.89	J/mol×K	746.57	Joback Method

cpg	500.99	J/mol×K	775.71	Joback Method
dvisc	0.0150556	Pa×s	304.40	Joback Method
dvisc	0.0032736	Pa×s	353.81	Joback Method
dvisc	0.0010346	Pa×s	403.22	Joback Method
dvisc	0.0004204	Pa×s	452.62	Joback Method
dvisc	0.0002040	Pa×s	502.03	Joback Method
dvisc	0.0001127	Pa×s	551.44	Joback Method
dvisc	0.0000686	Pa×s	600.85	Joback Method

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=C22882866&Units=SI
Crippen Method: http://pubs.acs.org/doi/abs/10.1021/ci990307l

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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