

2-Decenoic acid, methyl ester, (E)-

Other names:	Methyl (E)-dec-2-enoate methyl (E)-2-decenoate
Inchi:	InChI=1S/C11H20O2/c1-3-4-5-6-7-8-9-10-11(12)13-2/h9-10H,3-8H2,1-2H3/b10-9+
InchiKey:	VVBWOSGRZNCBX-MDZDMXLPSA-N
Formula:	C11H20O2
SMILES:	CCCCCCCC=CC(=O)OC
Mol. weight [g/mol]:	184.28
CAS:	7367-85-3

Physical Properties

Property code	Value	Unit	Source
gf	-111.96	kJ/mol	Joback Method
hf	-397.95	kJ/mol	Joback Method
hfus	27.24	kJ/mol	Joback Method
hvap	49.19	kJ/mol	Joback Method
log10ws	-3.14		Crippen Method
logp	3.076		Crippen Method
mcvol	168.990	ml/mol	McGowan Method
pc	2111.94	kPa	Joback Method
rinpol	1299.00		NIST Webbook
rinpol	1299.00		NIST Webbook
ripol	1619.00		NIST Webbook
ripol	1619.00		NIST Webbook
tb	531.53	K	Joback Method
tc	709.61	K	Joback Method
tf	280.81	K	Joback Method
vc	0.655	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	397.35	J/molxK	531.53	Joback Method
cpg	464.33	J/molxK	679.93	Joback Method
cpg	452.12	J/molxK	650.25	Joback Method

cpg	439.33	J/molxK	620.57	Joback Method
cpg	425.95	J/molxK	590.89	Joback Method
cpg	411.96	J/molxK	561.21	Joback Method
cpg	475.98	J/molxK	709.61	Joback Method
dvisc	0.0001740	Paxs	531.53	Joback Method
dvisc	0.0002282	Paxs	489.74	Joback Method
dvisc	0.0003149	Paxs	447.96	Joback Method
dvisc	0.0004643	Paxs	406.17	Joback Method
dvisc	0.0007484	Paxs	364.38	Joback Method
dvisc	0.0013650	Paxs	322.60	Joback Method
dvisc	0.0029775	Paxs	280.81	Joback Method

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=C7367853&Units=SI

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
ripol:	Polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

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