

Vinyl decanoate

Other names:	Decanoic acid, ethenyl ester Decanoic acid, vinyl ester n-Capric acid vinyl ester
Inchi:	InChI=1S/C12H22O2/c1-3-5-6-7-8-9-10-11-12(13)14-4-2/h4H,2-3,5-11H2,1H3
InchiKey:	CMDXMIHZUJPRHG-UHFFFAOYSA-N
Formula:	C12H22O2
SMILES:	C=COC(=O)CCCCCCCCC
Mol. weight [g/mol]:	198.30
CAS:	4704-31-8

Physical Properties

Property code	Value	Unit	Source
gf	-95.92	kJ/mol	Joback Method
hf	-410.38	kJ/mol	Joback Method
hfus	28.34	kJ/mol	Joback Method
hvap	50.79	kJ/mol	Joback Method
log10ws	-4.06		Crippen Method
logp	3.814		Crippen Method
mcvol	183.080	ml/mol	McGowan Method
pc	1920.30	kPa	Joback Method
ripol	1812.00		NIST Webbook
ripol	1812.00		NIST Webbook
tb	546.93	K	Joback Method
tc	719.58	K	Joback Method
tf	295.40	K	Joback Method
vc	0.713	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	444.34	J/mol×K	546.93	Joback Method
cpg	514.06	J/mol×K	690.81	Joback Method
cpg	501.31	J/mol×K	662.03	Joback Method
cpg	487.98	J/mol×K	633.26	Joback Method

cpg	474.05	J/mol×K	604.48	Joback Method
cpg	459.51	J/mol×K	575.71	Joback Method
cpg	526.24	J/mol×K	719.58	Joback Method
dvisc	0.0001931	Pa×s	546.93	Joback Method
dvisc	0.0002516	Pa×s	505.01	Joback Method
dvisc	0.0003439	Pa×s	463.09	Joback Method
dvisc	0.0005002	Pa×s	421.17	Joback Method
dvisc	0.0007904	Pa×s	379.24	Joback Method
dvisc	0.0013996	Pa×s	337.32	Joback Method
dvisc	0.0029144	Pa×s	295.40	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
Coeff. A	1.46081e+01
Coeff. B	-4.35803e+03
Coeff. C	-8.25320e+01
Temperature range (K), min.	386.85
Temperature range (K), max.	551.31

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C4704318&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
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

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

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