3-methyl-1-decene

Inchi: InChI=1S/C11H22/c1-4-6-7-8-9-10-11(3)5-2/h5,11H,2,4,6-10H2,1,3H3
InchiKey: KHHHLDBLDKGPLI-UHFFFAOYSA-N
Formula: C11H22
SMILES: C=CC(C)CCCCCCC
Mol. weight [g/mol]: 154.29
CAS: ---

Physical Properties

Property code	Value	Unit	Source
gf	127.14	kJ/mol	Joback Method
hf	-150.22	kJ/mol	Joback Method
hfus	19.44	kJ/mol	Joback Method
hvap	39.02	kJ/mol	Joback Method
log10ws	-4.04		Crippen Method
logp	4.169		Crippen Method
mcvol	161.550	ml/mol	McGowan Method
pc	2021.76	kPa	Joback Method
rinpol	1048.00		NIST Webbook
tb	447.32	K	Joback Method
tc	615.61	K	Joback Method
tf	196.97	K	Joback Method
vc	0.626	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	343.11	J/mol×K	447.32	Joback Method
cpg	359.03	J/mol×K	475.37	Joback Method
cpg	374.31	J/mol×K	503.42	Joback Method
cpg	388.98	J/mol×K	531.47	Joback Method
cpg	403.04	J/mol×K	559.51	Joback Method
cpg	416.52	J/mol×K	587.56	Joback Method
cpg	429.43	J/mol×K	615.61	Joback Method
dvisc	0.0091557	Pa×s	196.97	Joback Method

dvisc	0.0028404	Pa×s	238.69	Joback Method
dvisc	0.0012483	Pa×s	280.42	Joback Method
dvisc	0.0006788	Pa×s	322.14	Joback Method
dvisc	0.0004245	Pa×s	363.87	Joback Method
dvisc	0.0002924	Pa×s	405.60	Joback Method
dvisc	0.0002159	Pa×s	447.32	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.57336e+01
Coeff. B	-4.34242e+03
Coeff. C	-7.01840e+01
Temperature range (K), min.	351.32
Temperature range (K), max.	486.84

Sources

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

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=R205964&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

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