4-Nonene, 5-methyl-

Other names: 5-Methyl-4-nonene
Inchi: InChI=1S/C10H20/c1-4-6-8-10(3)9-7-5-2/h8H,4-7,9H2,1-3H3/b10-8+
InchiKey: TZHLNYXJNGVBOJ-CSKARUKUSA-N
Formula: C10H20
SMILES: CCCC=C(C)CCCC
Mol. weight [g/mol]: 140.27
CAS: 15918-07-7

Physical Properties

Property code	Value	Unit	Source
gf	104.99	kJ/mol	Joback Method
hf	-142.30	kJ/mol	Joback Method
hfus	20.55	kJ/mol	Joback Method
hvap	37.89	kJ/mol	Joback Method
log10ws	-3.86		Crippen Method
logp	3.923		Crippen Method
mcvol	147.460	ml/mol	McGowan Method
pc	2222.89	kPa	Joback Method
rinpol	1002.00		NIST Webbook
rinpol	1015.00		NIST Webbook
tb	432.24	K	Joback Method
tc	605.63	K	Joback Method
tf	183.42	K	Joback Method
vc	0.577	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	300.23	J/mol×K	432.24	Joback Method
cpg	315.43	J/mol×K	461.14	Joback Method
cpg	329.98	J/mol×K	490.04	Joback Method
cpg	343.91	J/mol×K	518.94	Joback Method
cpg	357.23	J/mol×K	547.83	Joback Method
cpg	369.97	J/mol×K	576.73	Joback Method

cpg	382.16	J/mol×K	605.63	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.53844e+01
Coeff. B	-4.05361e+03
Coeff. C	-6.34580e+01
Temperature range (K), min.	331.96
Temperature range (K), max.	465.88

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=C15918077&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
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