

4-Nonene

Other names:	4-Nonene,c&t non-4-ene
Inchi:	InChI=1S/C9H18/c1-3-5-7-9-8-6-4-2/h7,9H,3-6,8H2,1-2H3
InchiKey:	KPADFPAILITQBG-UHFFFAOYSA-N
Formula:	C9H18
SMILES:	CCCC=CCCCC
Mol. weight [g/mol]:	126.24
CAS:	2198-23-4

Physical Properties

Property code	Value	Unit	Source
gf	105.12	kJ/mol	Joback Method
hf	-111.87	kJ/mol	Joback Method
hfus	19.27	kJ/mol	Joback Method
hvap	35.59	kJ/mol	Joback Method
log10ws	-3.44		Crippen Method
logp	3.533		Crippen Method
mcvol	133.370	ml/mol	McGowan Method
pc	2426.65	kPa	Joback Method
rinpol	894.00		NIST Webbook
tb	417.00 ± 4.00	K	NIST Webbook
tb	418.00 ± 5.00	K	NIST Webbook
tb	421.00 ± 2.00	K	NIST Webbook
tb	419.65 ± 3.00	K	NIST Webbook
tb	420.10 ± 1.00	K	NIST Webbook
tb	418.20	K	NIST Webbook
tc	580.62	K	Joback Method
tf	186.11	K	Joback Method
vc	0.519	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	258.08	J/mol×K	409.48	Joback Method

cpg	272.06	J/mol×K	438.00	Joback Method
cpg	285.46	J/mol×K	466.53	Joback Method
cpg	298.29	J/mol×K	495.05	Joback Method
cpg	310.57	J/mol×K	523.57	Joback Method
cpg	322.32	J/mol×K	552.09	Joback Method
cpg	333.56	J/mol×K	580.62	Joback Method
dvisc	0.0055889	Pa×s	186.11	Joback Method
dvisc	0.0020238	Pa×s	223.34	Joback Method
dvisc	0.0009797	Pa×s	260.57	Joback Method
dvisc	0.0005686	Pa×s	297.80	Joback Method
dvisc	0.0003724	Pa×s	335.02	Joback Method
dvisc	0.0002654	Pa×s	372.25	Joback Method
dvisc	0.0002012	Pa×s	409.48	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
Coeff. A	1.50150e+01
Coeff. B	-3.75686e+03
Coeff. C	-5.76460e+01
Temperature range (K), min.	312.74
Temperature range (K), max.	444.81

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=C2198234&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

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

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