3-Nonene, (E)-

Other names:	(E)-3-C9H18
	(E)-3-Nonene
	(E)-non-3-ene
	trans-3-Nonene
Inchi:	InChI=1S/C9H18/c1-3-5-7-9-8-6-4-2/h5,7H,3-4,6,8-9H2,1-2H3/b7-5+
InchiKey:	YCBSHDKATAPNIA-FNORWQNLSA-N
Formula:	C9H18
SMILES:	CCC=CCCCCC
Mol. weight [g/mol]:	126.24
CAS:	20063-92-7

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
ie	9.01 ± 0.01	eV	NIST Webbook
ie	8.84 ± 0.01	eV	NIST Webbook
log10ws	-3.44		Crippen Method
logp	3.533		Crippen Method
mcvol	133.370	ml/mol	McGowan Method
pc	2426.65	kPa	Joback Method
rinpol	886.00		NIST Webbook
rinpol	895.00		NIST Webbook
rinpol	897.90		NIST Webbook
rinpol	886.60		NIST Webbook
rinpol	886.50		NIST Webbook
rinpol	886.00		NIST Webbook
rinpol	886.30		NIST Webbook
rinpol	889.60		NIST Webbook
rinpol	889.60		NIST Webbook
rinpol	899.00		NIST Webbook
rinpol	895.00		NIST Webbook
rinpol	895.00		NIST Webbook
rinpol	887.00		NIST Webbook
rinpol	897.00		NIST Webbook

rinpol	850.00		NIST Webbook
rinpol	886.00		NIST Webbook
rinpol	886.00		NIST Webbook
rinpol	850.00		NIST Webbook
rinpol	886.00		NIST Webbook
rinpol	896.00		NIST Webbook
rinpol	896.00		NIST Webbook
rinpol	895.00		NIST Webbook
rinpol	895.00		NIST Webbook
rinpol	884.00		NIST Webbook
rinpol	884.00		NIST Webbook
rinpol	899.00		NIST Webbook
ripol	947.50		NIST Webbook
ripol	946.00		NIST Webbook
ripol	947.50		NIST Webbook
ripol	946.50		NIST Webbook
ripol	946.00		NIST Webbook
ripol	947.50		NIST Webbook
ripol	946.50		NIST Webbook
ripol	945.80		NIST Webbook
ripol	947.00		NIST Webbook
ripol	945.80		NIST Webbook
ripol	946.50		NIST Webbook
ripol	943.00		NIST Webbook
ripol	948.00		NIST Webbook
ripol	946.00		NIST Webbook
tb	420.70	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	333.56	J/mol×K	580.62	Joback Method
cpg	322.32	J/mol×K	552.09	Joback Method
cpg	310.57	J/mol×K	523.57	Joback Method
cpg	298.29	J/mol×K	495.05	Joback Method
cpg	285.46	J/mol×K	466.53	Joback Method
cpg	272.06	J/mol×K	438.00	Joback Method
cpg	258.08	J/mol×K	409.48	Joback Method

dvisc	0.0055889	Pa×s	186.11	Joback Method
dvisc	0.0002012	Pa×s	409.48	Joback Method
dvisc	0.0002654	Pa×s	372.25	Joback Method
dvisc	0.0003724	Pa×s	335.02	Joback Method
dvisc	0.0005686	Pa×s	297.80	Joback Method
dvisc	0.0009797	Pa×s	260.57	Joback Method
dvisc	0.0020238	Pa×s	223.34	Joback Method
hvapt	40.60	kJ/mol	399.00	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.50079e+01
Coeff. B	-3.76736e+03
Coeff. C	-5.80910e+01
Temperature range (K), min.	314.02
Temperature range (K), max.	446.62

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=C20063927&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
hvapt:	Enthalpy of vaporization at a given temperature
ie:	Ionization energy
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
ripol:	Polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume