trans--4-Nonene

Other names:	4-Nonene, (Z)- (4Z)-4-Nonene (Z)-4-C9H18 (E)-4-C9H18 4-Nonene, (E)- (4E)-4-Nonene (E)-4-Nonene
Inchi:	InChI=1S/C9H18/c1-3-5-7-9-8-6-4-2/h7,9H,3-6,8H2,1-2H3/b9-7+
InchiKey:	KPADFPAILITQBG-VQHVLOKHSA-N
Formula:	C9H18
SMILES:	CCCC=CCCCC
Mol. weight [g/mol]:	126.24
CAS:	10405-85-3

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	8.81 ± 0.01	eV	NIST Webbook
ie	8.80 ± 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	885.00		NIST Webbook
rinpol	884.20		NIST Webbook
rinpol	887.20		NIST Webbook
rinpol	876.00		NIST Webbook
rinpol	884.00		NIST Webbook
rinpol	840.00		NIST Webbook
rinpol	894.00		NIST Webbook
rinpol	884.00		NIST Webbook
rinpol	893.00		NIST Webbook
rinpol	894.00		NIST Webbook
rinpol	894.00		NIST Webbook

rinpol	893.00	NIST Webbook
rinpol	884.20	NIST Webbook
rinpol	884.40	NIST Webbook
rinpol	884.00	NIST Webbook
rinpol	884.10	NIST Webbook
rinpol	887.80	NIST Webbook
rinpol	887.20	NIST Webbook
rinpol	884.00	NIST Webbook
rinpol	896.00	NIST Webbook
rinpol	894.00	NIST Webbook
rinpol	884.00	NIST Webbook
rinpol	885.00	NIST Webbook
rinpol	895.00	NIST Webbook
rinpol	884.80	NIST Webbook
rinpol	885.00	NIST Webbook
rinpol	894.00	NIST Webbook
rinpol	895.00	NIST Webbook
rinpol	885.10	NIST Webbook
rinpol	897.00	NIST Webbook
rinpol	876.00	NIST Webbook
rinpol	876.00	NIST Webbook
rinpol	885.00	NIST Webbook
rinpol	886.00	NIST Webbook
rinpol	885.00	NIST Webbook
rinpol	890.70	NIST Webbook
rinpol	892.40	NIST Webbook
rinpol	886.00	NIST Webbook
rinpol	839.00	NIST Webbook
ripol	941.20	NIST Webbook
ripol	952.00	NIST Webbook
ripol	941.20	NIST Webbook
ripol	940.70	NIST Webbook
ripol	941.00	NIST Webbook
ripol	973.00	NIST Webbook
ripol	940.70	NIST Webbook
ripol	939.20	NIST Webbook
ripol	941.20	NIST Webbook
ripol	939.20	NIST Webbook
ripol	940.70	NIST Webbook
ripol	937.00	NIST Webbook
ripol	939.00	NIST Webbook
ripol	941.00	NIST Webbook
ripol	952.00	NIST Webbook
ripol	952.00	NIST Webbook

ripol	953.00		NIST Webbook
ripol	951.80		NIST Webbook
ripol	948.50		NIST Webbook
ripol	952.00		NIST Webbook
ripol	947.00		NIST Webbook
ripol	951.80		NIST Webbook
ripol	948.00		NIST Webbook
ripol	948.50		NIST Webbook
tb	409.48	K	Joback Method
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	0.0020238	Pa×s	223.34	Joback Method
dvisc	0.0055889	Pa×s	186.11	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
hvapt	40.10	kJ/mol	398.50	NIST Webbook
hvapt	40.40	kJ/mol	398.00	NIST Webbook

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=C10405842&Units=SI

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
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
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