

# 2-Nonene, (E)-

<b>Other names:</b>	(E)- and (Z)-2-Nonene (E)-2-C <sub>9</sub> H <sub>18</sub> (E)-2-Nonene (E)-non-2-ene trans-2-Nonene «beta»-trans-Nonene Â«betaÂ»-trans-Nonene
<b>Inchi:</b>	InChI=1S/C <sub>9</sub> H <sub>18</sub> /c1-3-5-7-9-8-6-4-2/h3,5H,4,6-9H2,1-2H3/b5-3+
<b>InchiKey:</b>	IICQZTQZQSBHBY-HWKANZROSA-N
<b>Formula:</b>	C <sub>9</sub> H <sub>18</sub>
<b>SMILES:</b>	CC=CCCCCCC
<b>Mol. weight [g/mol]:</b>	126.24
<b>CAS:</b>	6434-78-2

## 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	8.90 ± 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	896.60		NIST Webbook
rinpol	896.00		NIST Webbook
rinpol	896.00		NIST Webbook
rinpol	903.00		NIST Webbook
rinpol	903.00		NIST Webbook
rinpol	906.00		NIST Webbook
rinpol	902.00		NIST Webbook
rinpol	903.00		NIST Webbook
rinpol	896.00		NIST Webbook
rinpol	903.00		NIST Webbook
rinpol	904.00		NIST Webbook
rinpol	896.60		NIST Webbook

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rinpol	904.00		NIST Webbook
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rinpol	903.00		NIST Webbook
rinpol	902.00		NIST Webbook
rinpol	903.00		NIST Webbook
rinpol	895.00		NIST Webbook
rinpol	895.00		NIST Webbook
rinpol	896.00		NIST Webbook
rinpol	897.00		NIST Webbook
rinpol	897.00		NIST Webbook
rinpol	902.60		NIST Webbook
rinpol	902.50		NIST Webbook
rinpol	896.50		NIST Webbook
rinpol	896.00		NIST Webbook
rinpol	916.00		NIST Webbook
ripol	965.00		NIST Webbook
ripol	965.00		NIST Webbook
ripol	956.00		NIST Webbook
ripol	961.00		NIST Webbook
ripol	964.80		NIST Webbook
ripol	964.70		NIST Webbook
ripol	963.20		NIST Webbook
ripol	964.80		NIST Webbook
ripol	963.20		NIST Webbook
ripol	964.70		NIST Webbook
ripol	961.00		NIST Webbook
ripol	965.00		NIST Webbook
ripol	963.00		NIST Webbook
tb	417.70	K	NIST Webbook
tc	580.62	K	Joback Method
tf	186.11	K	Joback Method
vc	0.519	m <sup>3</sup> /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/molxK	466.53	Joback Method
cpg	298.29	J/molxK	495.05	Joback Method
cpg	310.57	J/molxK	523.57	Joback Method
cpg	322.32	J/molxK	552.09	Joback Method
cpg	333.56	J/molxK	580.62	Joback Method
dvisc	0.0055889	Paxs	186.11	Joback Method
dvisc	0.0020238	Paxs	223.34	Joback Method
dvisc	0.0009797	Paxs	260.57	Joback Method
dvisc	0.0005686	Paxs	297.80	Joback Method
dvisc	0.0003724	Paxs	335.02	Joback Method
dvisc	0.0002654	Paxs	372.25	Joback Method
dvisc	0.0002012	Paxs	409.48	Joback Method
hvapt	40.80	kJ/mol	400.50	NIST Webbook

## Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
Coeff. A	1.50028e+01
Coeff. B	-3.74300e+03
Coeff. C	-5.72570e+01
Temperature range (K), min.	311.62
Temperature range (K), max.	443.48

## Sources

<b>Crippen Method:</b>	<a href="https://www.chemeo.com/doc/models/crippen_log10ws">https://www.chemeo.com/doc/models/crippen_log10ws</a>
<b>Joback Method:</b>	<a href="https://en.wikipedia.org/wiki/Joback_method">https://en.wikipedia.org/wiki/Joback_method</a>
<b>McGowan Method:</b>	<a href="http://link.springer.com/article/10.1007/BF02311772">http://link.springer.com/article/10.1007/BF02311772</a>
<b>NIST Webbook:</b>	<a href="http://webbook.nist.gov/cgi/cbook.cgi?ID=C6434782&amp;Units=SI">http://webbook.nist.gov/cgi/cbook.cgi?ID=C6434782&amp;Units=SI</a>
<b>The Yaws Handbook of Vapor Pressure:</b>	<a href="https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure">https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure</a>
<b>Crippen Method:</b>	<a href="http://pubs.acs.org/doi/abs/10.1021/ci9903071">http://pubs.acs.org/doi/abs/10.1021/ci9903071</a>

## Legend

<b>cpg:</b>	Ideal gas heat capacity
<b>dvisc:</b>	Dynamic viscosity
<b>gf:</b>	Standard Gibbs free energy of formation
<b>hf:</b>	Enthalpy of formation at standard conditions
<b>hfus:</b>	Enthalpy of fusion at standard conditions
<b>hvap:</b>	Enthalpy of vaporization at standard conditions
<b>hvapt:</b>	Enthalpy of vaporization at a given temperature
<b>ie:</b>	Ionization energy
<b>log10ws:</b>	Log10 of Water solubility in mol/l
<b>logp:</b>	Octanol/Water partition coefficient
<b>mcvol:</b>	McGowan's characteristic volume
<b>pc:</b>	Critical Pressure
<b>pvap:</b>	Vapor pressure
<b>rinpola:</b>	Non-polar retention indices
<b>ripola:</b>	Polar retention indices
<b>tb:</b>	Normal Boiling Point Temperature
<b>tc:</b>	Critical Temperature
<b>tf:</b>	Normal melting (fusion) point
<b>vc:</b>	Critical Volume

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