

# 2,5-Norbornadiene

<b>Other names:</b>	3,6-Methano-1,4-cyclohexadiene 8,9,10-trinorborna-2,5-diene Bicyclo[2.2.1]-2,5-heptadiene Bicyclo[2.2.1]hepta-2,5-diene Bicyclo[2.2.1]heptadiene Dicycloheptadiene NSC 13672 Norbornadiene
<b>Inchi:</b>	InChI=1S/C7H8/c1-2-7-4-3-6(1)5-7/h1-4,6-7H,5H2
<b>InchiKey:</b>	SJYNFBVQFBRSL-UHFFFAOYSA-N
<b>Formula:</b>	C7H8
<b>SMILES:</b>	C1=CC2C=CC1C2
<b>Mol. weight [g/mol]:</b>	92.14
<b>CAS:</b>	121-46-0

## Physical Properties

Property code	Value	Unit	Source
affp	849.30	kJ/mol	NIST Webbook
basg	820.30	kJ/mol	NIST Webbook
chl	-4111.70 ± 3.00	kJ/mol	NIST Webbook
chl	-4099.00	kJ/mol	NIST Webbook
chl	-4076.70 ± 1.00	kJ/mol	NIST Webbook
gf	177.38	kJ/mol	Joback Method
hf	67.19	kJ/mol	Joback Method
hfl	178.70 ± 1.00	kJ/mol	NIST Webbook
hfl	213.80 ± 3.00	kJ/mol	NIST Webbook
hfus	10.50	kJ/mol	Joback Method
hvap	31.76	kJ/mol	Joback Method
ie	8.60	eV	NIST Webbook
ie	8.70	eV	NIST Webbook
ie	8.38 ± 0.04	eV	NIST Webbook
ie	8.69	eV	NIST Webbook
ie	8.40	eV	NIST Webbook
ie	8.35	eV	NIST Webbook
ie	8.35	eV	NIST Webbook
ie	8.42	eV	NIST Webbook
ie	8.42 ± 0.02	eV	NIST Webbook

ie	8.69	eV	NIST Webbook
ie	8.70	eV	NIST Webbook
ie	8.73	eV	NIST Webbook
ie	8.73	eV	NIST Webbook
ie	8.69	eV	NIST Webbook
ie	8.69	eV	NIST Webbook
log10ws	-1.77		Crippen Method
logp	1.748		Crippen Method
mcvol	79.170	ml/mol	McGowan Method
pc	4255.16	kPa	Joback Method
rinpol	686.00		NIST Webbook
rinpol	711.00		NIST Webbook
rinpol	707.00		NIST Webbook
rinpol	691.10		NIST Webbook
rinpol	686.30		NIST Webbook
rinpol	722.80		NIST Webbook
rinpol	718.30		NIST Webbook
rinpol	712.00		NIST Webbook
rinpol	708.00		NIST Webbook
rinpol	711.00		NIST Webbook
rinpol	707.00		NIST Webbook
rinpol	681.20		NIST Webbook
rinpol	678.00		NIST Webbook
rinpol	683.00		NIST Webbook
rinpol	687.00		NIST Webbook
rinpol	691.00		NIST Webbook
rinpol	698.00		NIST Webbook
rinpol	706.00		NIST Webbook
rinpol	708.00		NIST Webbook
rinpol	686.00		NIST Webbook
tb	$355.40 \pm 0.80$	K	NIST Webbook
tb	362.70	K	NIST Webbook
tb	363.40	K	NIST Webbook
tc	582.98	K	Joback Method
tf	254.00	K	NIST Webbook
tf	$205.15 \pm 1.00$	K	NIST Webbook
vc	0.305	m3/kmol	Joback Method

## Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
---------------	-------	------	-----------------	--------

cpg	204.21	J/mol×K	582.98	Joback Method
cpg	136.22	J/mol×K	375.63	Joback Method
cpg	194.97	J/mol×K	548.42	Joback Method
cpg	184.97	J/mol×K	513.86	Joback Method
cpg	174.16	J/mol×K	479.30	Joback Method
cpg	162.48	J/mol×K	444.75	Joback Method
cpg	149.85	J/mol×K	410.19	Joback Method
cpl	116.10	J/mol×K	297.00	NIST Webbook
cpl	161.20	J/mol×K	298.15	NIST Webbook
dvisc	0.0003673	Paxs	317.93	Joback Method
dvisc	0.0003745	Paxs	375.63	Joback Method
dvisc	0.0003417	Paxs	202.53	Joback Method
dvisc	0.0003503	Paxs	231.38	Joback Method
dvisc	0.0003571	Paxs	260.23	Joback Method
dvisc	0.0003627	Paxs	289.08	Joback Method
dvisc	0.0003712	Paxs	346.78	Joback Method
hfust	1.91	kJ/mol	255.60	NIST Webbook
hvapt	33.60	kJ/mol	332.00	NIST Webbook
tcondl	0.13	W/m×K	313.38	Thermal Conductivity and Thermal Diffusivity of Twenty-Nine Liquids: Alkenes, Cyclic (Alkanes, Alkenes, Alkadienes, Aromatics), and Deuterated Hydrocarbons
tcondl	0.14	W/m×K	296.43	Thermal Conductivity and Thermal Diffusivity of Twenty-Nine Liquids: Alkenes, Cyclic (Alkanes, Alkenes, Alkadienes, Aromatics), and Deuterated Hydrocarbons
tcondl	0.13	W/m×K	313.27	Thermal Conductivity and Thermal Diffusivity of Twenty-Nine Liquids: Alkenes, Cyclic (Alkanes, Alkenes, Alkadienes, Aromatics), and Deuterated Hydrocarbons

tcondl	0.14	W/mxK	296.35	Thermal Conductivity and Thermal Diffusivity of Twenty-Nine Liquids: Alkenes, Cyclic (Alkanes, Alkenes, Alkadienes, Aromatics), and Deuterated Hydrocarbons
tcondl	0.13	W/mxK	313.46	Thermal Conductivity and Thermal Diffusivity of Twenty-Nine Liquids: Alkenes, Cyclic (Alkanes, Alkenes, Alkadienes, Aromatics), and Deuterated Hydrocarbons
tcondl	0.13	W/mxK	331.81	Thermal Conductivity and Thermal Diffusivity of Twenty-Nine Liquids: Alkenes, Cyclic (Alkanes, Alkenes, Alkadienes, Aromatics), and Deuterated Hydrocarbons
tcondl	0.13	W/mxK	331.91	Thermal Conductivity and Thermal Diffusivity of Twenty-Nine Liquids: Alkenes, Cyclic (Alkanes, Alkenes, Alkadienes, Aromatics), and Deuterated Hydrocarbons
tcondl	0.13	W/mxK	331.98	Thermal Conductivity and Thermal Diffusivity of Twenty-Nine Liquids: Alkenes, Cyclic (Alkanes, Alkenes, Alkadienes, Aromatics), and Deuterated Hydrocarbons

tcondl	0.14	W/mxK	296.23	Thermal Conductivity and Thermal Diffusivity of Twenty-Nine Liquids: Alkenes, Cyclic (Alkanes, Alkenes, Alkadienes, Aromatics), and Deuterated Hydrocarbons
tcondl	0.14	W/mxK	276.89	Thermal Conductivity and Thermal Diffusivity of Twenty-Nine Liquids: Alkenes, Cyclic (Alkanes, Alkenes, Alkadienes, Aromatics), and Deuterated Hydrocarbons
tcondl	0.14	W/mxK	276.78	Thermal Conductivity and Thermal Diffusivity of Twenty-Nine Liquids: Alkenes, Cyclic (Alkanes, Alkenes, Alkadienes, Aromatics), and Deuterated Hydrocarbons
tcondl	0.15	W/mxK	258.80	Thermal Conductivity and Thermal Diffusivity of Twenty-Nine Liquids: Alkenes, Cyclic (Alkanes, Alkenes, Alkadienes, Aromatics), and Deuterated Hydrocarbons
tcondl	0.15	W/mxK	258.70	Thermal Conductivity and Thermal Diffusivity of Twenty-Nine Liquids: Alkenes, Cyclic (Alkanes, Alkenes, Alkadienes, Aromatics), and Deuterated Hydrocarbons

tcondl	0.15	W/mxK	258.57	Thermal Conductivity and Thermal Diffusivity of Twenty-Nine Liquids: Alkenes, Cyclic (Alkanes, Alkenes, Alkadienes, Aromatics), and Deuterated Hydrocarbons
tcondl	0.14	W/mxK	276.97	Thermal Conductivity and Thermal Diffusivity of Twenty-Nine Liquids: Alkenes, Cyclic (Alkanes, Alkenes, Alkadienes, Aromatics), and Deuterated Hydrocarbons

## Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
Coeff. A	1.47410e+01
Coeff. B	-3.37634e+03
Coeff. C	-2.91070e+01
Temperature range (K), min.	258.15
Temperature range (K), max.	387.17

## Sources

Thermal Conductivity and Thermal Diffusivity of Twenty-Nine Liquids: [Joback Method](#): (Alkanes, Alkenes, Alkadienes, Aromatics), and Deuterated Hydrocarbons: [McGowan Method](#):

NIST Webbook:

The Yaws Handbook of Vapor Pressure: [Crippen Method](#):

Crippen Method:

<https://www.doi.org/10.1021/je034162x>

[https://en.wikipedia.org/wiki/Joback\\_method](https://en.wikipedia.org/wiki/Joback_method)

<http://link.springer.com/article/10.1007/BF02311772>

<http://webbook.nist.gov/cgi/cbook.cgi?ID=C121460&Units=SI>

<https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure>

<http://pubs.acs.org/doi/abs/10.1021/ci9903071>

[https://www.chemeo.com/doc/models/crippen\\_log10ws](https://www.chemeo.com/doc/models/crippen_log10ws)

# Legend

<b>affp:</b>	Proton affinity
<b>basg:</b>	Gas basicity
<b>chl:</b>	Standard liquid enthalpy of combustion
<b>cpg:</b>	Ideal gas heat capacity
<b>cpl:</b>	Liquid phase 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>hfl:</b>	Liquid phase enthalpy of formation at standard conditions
<b>hfus:</b>	Enthalpy of fusion at standard conditions
<b>hfust:</b>	Enthalpy of fusion at a given temperature
<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>rinpol:</b>	Non-polar retention indices
<b>tb:</b>	Normal Boiling Point Temperature
<b>tc:</b>	Critical Temperature
<b>tcondl:</b>	Liquid thermal conductivity
<b>tf:</b>	Normal melting (fusion) point
<b>vc:</b>	Critical Volume

Latest version available from:

<https://www.chemeo.com/cid/62-532-2/2-5-Norbornadiene.pdf>

Generated by Cheméo on 2024-04-10 09:12:36.680247097 +0000 UTC m=+15029605.600824403.

Cheméo (<https://www.chemeo.com>) is the biggest free database of chemical and physical data for the process industry.