

# Cyclononane

**Inchi:** InChI=1S/C9H18/c1-2-4-6-8-9-7-5-3-1/h1-9H2  
**InchiKey:** GPTJTTCOVDDHER-UHFFFAOYSA-N  
**Formula:** C9H18  
**SMILES:** C1CCCCCCC1  
**Mol. weight [g/mol]:** 126.24  
**CAS:** 293-55-0

## Physical Properties

Property code	Value	Unit	Source
chl	-5931.40 ± 0.90	kJ/mol	NIST Webbook
gf	20.76	kJ/mol	Joback Method
hf	-172.91	kJ/mol	Joback Method
hfus	3.53	kJ/mol	Joback Method
hvap	49.70	kJ/mol	NIST Webbook
log10ws	-3.48		Crippen Method
logp	3.511		Crippen Method
mcvol	126.810	ml/mol	McGowan Method
pc	3195.54	kPa	Joback Method
rinpol	1043.00		NIST Webbook
rinpol	1035.70		NIST Webbook
rinpol	1093.00		NIST Webbook
rinpol	1049.00		NIST Webbook
rinpol	1093.00		NIST Webbook
rinpol	1043.00		NIST Webbook
rinpol	1093.00		NIST Webbook
rinpol	1049.00		NIST Webbook
tb	444.00 ± 4.00	K	NIST Webbook
tb	451.59 ± 0.20	K	NIST Webbook
tb	448.00 ± 2.00	K	NIST Webbook
tc	667.45	K	Joback Method
tf	192.25	K	Joback Method
vc	0.450	m <sup>3</sup> /kmol	Joback Method

# Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	253.90	J/molxK	442.35	Joback Method
cpg	351.52	J/molxK	629.93	Joback Method
cpg	334.19	J/molxK	592.41	Joback Method
cpg	315.78	J/molxK	554.90	Joback Method
cpg	296.27	J/molxK	517.38	Joback Method
cpg	275.64	J/molxK	479.87	Joback Method
cpg	367.79	J/molxK	667.45	Joback Method
dvisc	0.0001768	Paxs	442.35	Joback Method
dvisc	0.0002946	Paxs	400.67	Joback Method
dvisc	0.0005525	Paxs	358.98	Joback Method
dvisc	0.0012223	Paxs	317.30	Joback Method
dvisc	0.0034385	Paxs	275.62	Joback Method
dvisc	0.0139838	Paxs	233.93	Joback Method
dvisc	0.1044899	Paxs	192.25	Joback Method

# Pressure Dependent Properties

Property code	Value	Unit	Pressure [kPa]	Source
tbrp	342.20	K	1.90	NIST Webbook

# Sources

**Joback Method:**

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

**KDB:**

<https://www.thermo.com/files/research/kdb/mol/mol582.mol>

**McGowan Method:**

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

**NIST Webbook:**

<http://webbook.nist.gov/cgi/cbook.cgi?ID=C293550&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/ci9903071>

**Crippen Method:**

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

# Legend

<b>chl:</b>	Standard liquid enthalpy of combustion
<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>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>rinpola:</b>	Non-polar retention indices
<b>tb:</b>	Normal Boiling Point Temperature
<b>tbrp:</b>	Boiling point at reduced pressure
<b>tc:</b>	Critical Temperature
<b>tf:</b>	Normal melting (fusion) point
<b>vc:</b>	Critical Volume

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