

# 1,2,3,4,4a,9,10,10a-Octahydrophenanthrene (cis)

<b>Other names:</b>	cis-1,2,3,4,4a,9,10,10a-Octahydrophenanthrene
<b>Inchi:</b>	InChI=1S/C14H18/c1-3-7-13-11(5-1)9-10-12-6-2-4-8-14(12)13/h1,3,5,7,12,14H,2,4,6,8-10H
<b>InchiKey:</b>	KFGROPZLGDSAPK-JSGCOSHPA-N
<b>Formula:</b>	C14H18
<b>SMILES:</b>	<chem>c1ccc2c(c1)CCC1CCCCC21</chem>
<b>Mol. weight [g/mol]:</b>	186.29
<b>CAS:</b>	20480-66-4

## Physical Properties

Property code	Value	Unit	Source
gf	267.08	kJ/mol	Joback Method
hf	26.05	kJ/mol	Joback Method
hfus	17.74	kJ/mol	Joback Method
hvap	49.87	kJ/mol	Joback Method
log10ws	-4.26		Crippen Method
logp	3.907		Crippen Method
mcvol	162.640	ml/mol	McGowan Method
pc	2668.02	kPa	Joback Method
tb	573.40	K	Joback Method
tc	815.14	K	Joback Method
tf	315.32	K	Joback Method
vc	0.610	m <sup>3</sup> /kmol	Joback Method

## Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	417.81	J/molxK	573.40	Joback Method
cpg	439.72	J/molxK	613.69	Joback Method
cpg	459.98	J/molxK	653.98	Joback Method
cpg	478.71	J/molxK	694.27	Joback Method
cpg	496.03	J/molxK	734.56	Joback Method
cpg	512.05	J/molxK	774.85	Joback Method
cpg	526.89	J/molxK	815.14	Joback Method
dvisc	0.0023471	Paxs	315.32	Joback Method

dvisc	0.0016004	Paxs	358.33	Joback Method
dvisc	0.0011846	Paxs	401.35	Joback Method
dvisc	0.0009294	Paxs	444.36	Joback Method
dvisc	0.0007611	Paxs	487.37	Joback Method
dvisc	0.0006438	Paxs	530.39	Joback Method
dvisc	0.0005584	Paxs	573.40	Joback Method

## Sources

<b>NIST Webbook:</b>	<a href="http://webbook.nist.gov/cgi/cbook.cgi?ID=C20480664&amp;Units=SI">http://webbook.nist.gov/cgi/cbook.cgi?ID=C20480664&amp;Units=SI</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>
<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>

## 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>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>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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