

# Phenanthrene, 9-phenyl-

<b>Other names:</b>	9-Phenylphenanthrene 9-phenylphenanthrene
<b>Inchi:</b>	InChI=1S/C20H14/c1-2-8-15(9-3-1)20-14-16-10-4-5-11-17(16)18-12-6-7-13-19(18)20/h1
<b>InchiKey:</b>	JGGISUSKZFMBOJ-UHFFFAOYSA-N
<b>Formula:</b>	C20H14
<b>SMILES:</b>	<chem>c1ccc(-c2cc3ccccc3c3ccccc23)cc1</chem>
<b>Mol. weight [g/mol]:</b>	254.33
<b>CAS:</b>	844-20-2

## Physical Properties

Property code	Value	Unit	Source
gf	536.38	kJ/mol	Joback Method
hf	376.13	kJ/mol	Joback Method
hfus	28.90	kJ/mol	Joback Method
hvap	69.27	kJ/mol	Joback Method
ie	7.65	eV	NIST Webbook
log10ws	-7.68		Crippen Method
logp	5.660		Crippen Method
mcvol	206.220	ml/mol	McGowan Method
pc	2460.47	kPa	Joback Method
rinpol	406.90		NIST Webbook
rinpol	404.02		NIST Webbook
rinpol	404.02		NIST Webbook
rinpol	406.90		NIST Webbook
rinpol	405.82		NIST Webbook
rinpol	405.36		NIST Webbook
tb	758.28	K	Joback Method
tc	1028.40	K	Joback Method
tf	458.44	K	Joback Method
vc	0.783	m <sup>3</sup> /kmol	Joback Method

## Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
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cpg	552.94	J/molxK	758.28	Joback Method
cpg	568.99	J/molxK	803.30	Joback Method
cpg	583.72	J/molxK	848.32	Joback Method
cpg	597.34	J/molxK	893.34	Joback Method
cpg	610.08	J/molxK	938.36	Joback Method
cpg	622.13	J/molxK	983.38	Joback Method
cpg	633.72	J/molxK	1028.40	Joback Method
dvisc	0.0013464	Paxs	458.44	Joback Method
dvisc	0.0009631	Paxs	508.41	Joback Method
dvisc	0.0007314	Paxs	558.39	Joback Method
dvisc	0.0005812	Paxs	608.36	Joback Method
dvisc	0.0004782	Paxs	658.33	Joback Method
dvisc	0.0004045	Paxs	708.31	Joback Method
dvisc	0.0003497	Paxs	758.28	Joback Method

## Sources

<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>
<b>NIST Webbook:</b>	<a href="http://webbook.nist.gov/cgi/cbook.cgi?ID=C844202&amp;Units=SI">http://webbook.nist.gov/cgi/cbook.cgi?ID=C844202&amp;Units=SI</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>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>rinpol:</b>	Non-polar retention indices
<b>tb:</b>	Normal Boiling Point Temperature

**tc:** Critical Temperature  
**tf:** Normal melting (fusion) point  
**vc:** Critical Volume

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