

# 3,3-Dimethylpiperidine

<b>Other names:</b>	Piperidine, 3,3-dimethyl-
<b>Inchi:</b>	InChI=1S/C7H15N/c1-7(2)4-3-5-8-6-7/h8H,3-6H2,1-2H3
<b>InchiKey:</b>	CDODDZJCEADUQQ-UHFFFAOYSA-N
<b>Formula:</b>	C7H15N
<b>SMILES:</b>	CC1(C)CCCNC1
<b>Mol. weight [g/mol]:</b>	113.20
<b>CAS:</b>	1193-12-0

## Physical Properties

Property code	Value	Unit	Source
gf	114.73	kJ/mol	Joback Method
hf	-80.44	kJ/mol	Joback Method
hfus	9.01	kJ/mol	Joback Method
hvap	37.21	kJ/mol	Joback Method
ie	8.05 ± 0.05	eV	NIST Webbook
log10ws	-1.59		Crippen Method
logp	1.396		Crippen Method
mcvol	108.610	ml/mol	McGowan Method
pc	3834.03	kPa	Joback Method
rinpola	870.00		NIST Webbook
tb	410.20	K	NIST Webbook
tc	649.20	K	Joback Method
tf	304.96	K	Joback Method
vc	0.396	m <sup>3</sup> /kmol	Joback Method

## Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	216.01	J/mol×K	427.90	Joback Method
cpg	233.15	J/mol×K	464.78	Joback Method
cpg	249.12	J/mol×K	501.67	Joback Method
cpg	264.03	J/mol×K	538.55	Joback Method
cpg	278.00	J/mol×K	575.43	Joback Method
cpg	291.12	J/mol×K	612.32	Joback Method

## Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
Coeff. A	1.43187e+01
Coeff. B	-3.44392e+03
Coeff. C	-5.51720e+01
Temperature range (K), min.	300.62
Temperature range (K), max.	437.52

## 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=C1193120&amp;Units=SI">http://webbook.nist.gov/cgi/cbook.cgi?ID=C1193120&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>

## Legend

<b>cpg:</b>	Ideal gas heat capacity
<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>pvap:</b>	Vapor pressure

<b>rinpol:</b>	Non-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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