

# trans-4a-Methyl-decahydronaphthalene

<b>Other names:</b>	trans-9-Methyldecalin 1-Methyl-trans-bicyclo[4.4.0]decane
<b>Inchi:</b>	InChI=1S/C11H20/c1-11-8-4-2-6-10(11)7-3-5-9-11/h10H,2-9H2,1H3/t10-,11-
<b>InchiKey:</b>	RAFDCSMAXTUJKJ-XYPPYZODXSA-N
<b>Formula:</b>	C11H20
<b>SMILES:</b>	CC12CCCCC1CCCC2
<b>Mol. weight [g/mol]:</b>	152.28
<b>CAS:</b>	2547-27-5

## Physical Properties

Property code	Value	Unit	Source
chl	-6937.20 ± 1.70	kJ/mol	NIST Webbook
gf	109.35	kJ/mol	Joback Method
hf	-134.17	kJ/mol	Joback Method
hfl	-249.80 ± 1.80	kJ/mol	NIST Webbook
hfus	5.82	kJ/mol	Joback Method
hvap	39.44	kJ/mol	Joback Method
log10ws	-3.73		Crippen Method
logp	3.757		Crippen Method
mcvol	144.130	ml/mol	McGowan Method
pc	2862.74	kPa	Joback Method
tb	481.88	K	Joback Method
tc	710.30	K	Joback Method
tf	259.43	K	Joback Method
vc	0.531	m3/kmol	Joback Method

## Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	334.23	J/molxK	481.88	Joback Method
cpg	357.60	J/molxK	519.95	Joback Method
cpg	379.26	J/molxK	558.02	Joback Method
cpg	399.38	J/molxK	596.09	Joback Method
cpg	418.13	J/molxK	634.16	Joback Method

cpg	435.67	J/mol×K	672.23	Joback Method
cpg	452.17	J/mol×K	710.30	Joback Method

## Sources

<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=C2547275&amp;Units=SI">http://webbook.nist.gov/cgi/cbook.cgi?ID=C2547275&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>

## Legend

<b>chl:</b>	Standard liquid enthalpy of combustion
<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>hfl:</b>	Liquid phase 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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