

# trans-1,2-Dimethylcyclooctane

Inchi:	InChI=1S/C10H20/c1-9-7-5-3-4-6-8-10(9)2/h9-10H,3-8H2,1-2H3/t9-,10-/m0/s1
InchiKey:	OJGUADSLWNGMCA-UWVGGRQHSA-N
Formula:	C10H20
SMILES:	CC1CCCCCCC1C
Mol. weight [g/mol]:	140.27

## Physical Properties

Property code	Value	Unit	Source
gf	25.86	kJ/mol	Joback Method
hf	-228.07	kJ/mol	Joback Method
hfus	10.36	kJ/mol	Joback Method
hvap	38.32	kJ/mol	Joback Method
log10ws	-3.42		Crippen Method
logp	3.613		Crippen Method
mcvol	140.900	ml/mol	McGowan Method
pc	2613.74	kPa	Joback Method
rinpol	1069.00		NIST Webbook
rinpol	1069.00		NIST Webbook
tb	451.62	K	Joback Method
tc	664.17	K	Joback Method
tf	198.56	K	Joback Method
vc	0.511	m <sup>3</sup> /kmol	Joback Method

## Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	299.48	J/molxK	451.62	Joback Method
cpg	321.60	J/molxK	487.04	Joback Method
cpg	342.69	J/molxK	522.47	Joback Method
cpg	362.77	J/molxK	557.89	Joback Method
cpg	381.82	J/molxK	593.32	Joback Method
cpg	399.87	J/molxK	628.74	Joback Method
cpg	416.93	J/molxK	664.17	Joback Method
dvisc	0.0157765	Paxs	198.56	Joback Method

dvisc	0.0039995	Paxs	240.74	Joback Method
dvisc	0.0015265	Paxs	282.91	Joback Method
dvisc	0.0007481	Paxs	325.09	Joback Method
dvisc	0.0004318	Paxs	367.27	Joback Method
dvisc	0.0002792	Paxs	409.44	Joback Method
dvisc	0.0001958	Paxs	451.62	Joback Method

## Sources

<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=R133443&amp;Units=SI">http://webbook.nist.gov/cgi/cbook.cgi?ID=R133443&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>

## 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>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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