

# trans,trans-1,6-Cyclodecadiene

<b>Inchi:</b>	InChI=1S/C10H16/c1-2-4-6-8-10-9-7-5-3-1/h1-2,9-10H,3-8H2/b2-1+,10-9+
<b>InchiKey:</b>	GWCMUONZBWHLRN-LLGXEZKASA-N
<b>Formula:</b>	C10H16
<b>SMILES:</b>	C1=CCCCC=CCCC1
<b>Mol. weight [g/mol]:</b>	136.23
<b>CAS:</b>	15840-81-0

## Physical Properties

Property code	Value	Unit	Source
gf	77.00	kJ/mol	Joback Method
hf	-84.15	kJ/mol	Joback Method
hfus	6.46	kJ/mol	Joback Method
hvap	39.86	kJ/mol	Joback Method
ie	8.05	eV	NIST Webbook
log10ws	-3.61		Crippen Method
logp	3.453		Crippen Method
mcvol	132.300	ml/mol	McGowan Method
pc	3199.16	kPa	Joback Method
rinpol	1084.00		NIST Webbook
tb	467.82	K	Joback Method
tc	703.55	K	Joback Method
tf	201.52	K	Joback Method
vc	0.469	m <sup>3</sup> /kmol	Joback Method

## Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	268.70	J/mol×K	467.82	Joback Method
cpg	290.00	J/mol×K	507.11	Joback Method
cpg	310.09	J/mol×K	546.40	Joback Method
cpg	328.97	J/mol×K	585.69	Joback Method
cpg	346.67	J/mol×K	624.97	Joback Method
cpg	363.19	J/mol×K	664.26	Joback Method
cpg	378.55	J/mol×K	703.55	Joback Method

dvisc	0.0788658	Paxs	201.52	Joback Method
dvisc	0.0101791	Paxs	245.90	Joback Method
dvisc	0.0024571	Paxs	290.29	Joback Method
dvisc	0.0008647	Paxs	334.67	Joback Method
dvisc	0.0003886	Paxs	379.05	Joback Method
dvisc	0.0002065	Paxs	423.44	Joback Method
dvisc	0.0001238	Paxs	467.82	Joback Method

## Sources

<b>NIST Webbook:</b>	<a href="http://webbook.nist.gov/cgi/cbook.cgi?ID=C15840810&amp;Units=SI">http://webbook.nist.gov/cgi/cbook.cgi?ID=C15840810&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>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
<b>tc:</b>	Critical Temperature
<b>tf:</b>	Normal melting (fusion) point
<b>vc:</b>	Critical Volume

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