

# trans-2,cis-7-decadiene

Inchi:	InChI=1S/C10H18/c1-3-5-7-9-10-8-6-4-2/h3,5-6,8H,4,7,9-10H2,1-2H3/b5-3+,8-6-
InchiKey:	HIPQYVJOMHDTRF-GMWFMGJWSA-N
Formula:	C10H18
SMILES:	CC=CCCC=CCC
Mol. weight [g/mol]:	138.25

## Physical Properties

Property code	Value	Unit	Source
gf	193.76	kJ/mol	Joback Method
hf	-15.29	kJ/mol	Joback Method
hfus	22.06	kJ/mol	Joback Method
hvap	37.77	kJ/mol	Joback Method
log10ws	-3.72		Crippen Method
logp	3.699		Crippen Method
mcvol	143.160	ml/mol	McGowan Method
pc	2324.78	kPa	Joback Method
rinpol	980.10		NIST Webbook
rinpol	980.10		NIST Webbook
tb	436.52	K	Joback Method
tc	614.98	K	Joback Method
tf	192.30	K	Joback Method
vc	0.555	m <sup>3</sup> /kmol	Joback Method

## Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	285.06	J/mol×K	436.52	Joback Method
cpg	299.83	J/mol×K	466.26	Joback Method
cpg	313.89	J/mol×K	496.01	Joback Method
cpg	327.27	J/mol×K	525.75	Joback Method
cpg	340.00	J/mol×K	555.49	Joback Method
cpg	352.10	J/mol×K	585.24	Joback Method
cpg	363.62	J/mol×K	614.98	Joback Method
dvisc	0.0054554	Paxs	192.30	Joback Method

dvisc	0.0018265	Paxs	233.00	Joback Method
dvisc	0.0008467	Paxs	273.71	Joback Method
dvisc	0.0004790	Paxs	314.41	Joback Method
dvisc	0.0003088	Paxs	355.11	Joback Method
dvisc	0.0002178	Paxs	395.82	Joback Method
dvisc	0.0001640	Paxs	436.52	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=R250058&amp;Units=SI">http://webbook.nist.gov/cgi/cbook.cgi?ID=R250058&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>cp<sub>g</sub>:</b>	Ideal gas heat capacity
<b>dvisc:</b>	Dynamic viscosity
<b>g<sub>f</sub>:</b>	Standard Gibbs free energy of formation
<b>h<sub>f</sub>:</b>	Enthalpy of formation at standard conditions
<b>h<sub>fus</sub>:</b>	Enthalpy of fusion at standard conditions
<b>h<sub>vap</sub>:</b>	Enthalpy of vaporization at standard conditions
<b>log<sub>10</sub>w<sub>s</sub>:</b>	Log <sub>10</sub> of Water solubility in mol/l
<b>log<sub>p</sub>:</b>	Octanol/Water partition coefficient
<b>mc<sub>vol</sub>:</b>	McGowan's characteristic volume
<b>pc:</b>	Critical Pressure
<b>rin<sub>pol</sub>:</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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