

# 2,2-Dimethylhexadecane

<b>Inchi:</b>	InChI=1S/C18H38/c1-5-6-7-8-9-10-11-12-13-14-15-16-17-18(2,3)4/h5-17H2,1-4H3
<b>InchiKey:</b>	JUDMLKAUYABUCD-UHFFFAOYSA-N
<b>Formula:</b>	C18H38
<b>SMILES:</b>	CCCCCCCCCCCCCCC(C)(C)C
<b>Mol. weight [g/mol]:</b>	254.49
<b>CAS:</b>	19486-08-9

## Physical Properties

Property code	Value	Unit	Source
gf	103.52	kJ/mol	Joback Method
hf	-423.60	kJ/mol	Joback Method
hfus	34.96	kJ/mol	Joback Method
hvap	54.37	kJ/mol	Joback Method
log10ws	-7.12		Crippen Method
logp	7.124		Crippen Method
mvol	264.480	ml/mol	McGowan Method
pc	1167.22	kPa	Joback Method
rinpol	1716.00		NIST Webbook
tb	608.01	K	Joback Method
tc	772.93	K	Joback Method
tf	295.04	K	Joback Method
vc	1.032	m <sup>3</sup> /kmol	Joback Method

## Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	725.69	J/molxK	608.01	Joback Method
cpg	746.49	J/molxK	635.50	Joback Method
cpg	766.38	J/molxK	662.98	Joback Method
cpg	785.40	J/molxK	690.47	Joback Method
cpg	803.57	J/molxK	717.95	Joback Method
cpg	820.93	J/molxK	745.44	Joback Method
cpg	837.52	J/molxK	772.93	Joback Method
dvisc	0.0054801	Paxs	295.04	Joback Method

dvisc	0.0017463	Paxs	347.20	Joback Method
dvisc	0.0007503	Paxs	399.36	Joback Method
dvisc	0.0003918	Paxs	451.52	Joback Method
dvisc	0.0002341	Paxs	503.69	Joback Method
dvisc	0.0001540	Paxs	555.85	Joback Method
dvisc	0.0001089	Paxs	608.01	Joback Method

## Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
Coeff. A	1.40493e+01
Coeff. B	-4.22792e+03
Coeff. C	-1.29850e+02
Temperature range (K), min.	437.15
Temperature range (K), max.	614.15

## 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=R415057&amp;Units=SI">http://webbook.nist.gov/cgi/cbook.cgi?ID=R415057&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>
<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>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>pvap:</b>	Vapor pressure
<b>rinpola:</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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