

# Cyclohexane, (1-butylhexadecyl)-

<b>Other names:</b>	5-Cyclohexyleicosane Eicosane, 5-cyclohexyl-
<b>Inchi:</b>	InChI=1S/C26H52/c1-3-5-7-8-9-10-11-12-13-14-15-16-18-22-25(21-6-4-2)26-23-19-17-20
<b>InchiKey:</b>	MBXKQVDZISXAHH-UHFFFAOYSA-N
<b>Formula:</b>	C26H52
<b>SMILES:</b>	CCCCCCCCCCCCCCCC(CCCC)C1CCCCC1
<b>Mol. weight [g/mol]:</b>	364.69
<b>CAS:</b>	4443-59-8

## Physical Properties

Property code	Value	Unit	Source
gf	190.05	kJ/mol	Joback Method
hf	-530.93	kJ/mol	Joback Method
hfus	51.41	kJ/mol	Joback Method
hvap	73.51	kJ/mol	Joback Method
log10ws	-10.12		Crippen Method
logp	9.854		Crippen Method
mvol	366.340	ml/mol	McGowan Method
pc	815.86	kPa	Joback Method
tb	813.39	K	Joback Method
tc	999.44	K	Joback Method
tf	270.95 ± 0.50	K	NIST Webbook
tf	264.00 ± 4.00	K	NIST Webbook
tf	264.00 ± 4.00	K	NIST Webbook
vc	1.419	m <sup>3</sup> /kmol	Joback Method

## Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	1345.98	J/mol×K	999.44	Joback Method
cpg	1217.92	J/mol×K	813.39	Joback Method
cpg	1242.43	J/mol×K	844.40	Joback Method
cpg	1265.60	J/mol×K	875.41	Joback Method
cpg	1287.48	J/mol×K	906.41	Joback Method

cpg	1308.14	J/mol×K	937.42	Joback Method
cpg	1327.62	J/mol×K	968.43	Joback Method
dvisc	0.0000417	Paxs	813.39	Joback Method
dvisc	0.0027649	Paxs	375.16	Joback Method
dvisc	0.0007775	Paxs	448.20	Joback Method
dvisc	0.0003120	Paxs	521.24	Joback Method
dvisc	0.0001567	Paxs	594.27	Joback Method
dvisc	0.0000915	Paxs	667.31	Joback Method
dvisc	0.0000594	Paxs	740.35	Joback Method
hvapt	98.30	kJ/mol	506.00	NIST Webbook

## Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
Coeff. A	1.55638e+01
Coeff. B	-6.00670e+03
Coeff. C	-1.35194e+02
Temperature range (K), min.	528.40
Temperature range (K), max.	721.08

## 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=C4443598&amp;Units=SI">http://webbook.nist.gov/cgi/cbook.cgi?ID=C4443598&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/ci990307I">http://pubs.acs.org/doi/abs/10.1021/ci990307I</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>h vap:</b>	Enthalpy of vaporization at standard conditions
<b>hvapt:</b>	Enthalpy of vaporization at a given temperature
<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>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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