

# Tridecane, 5-methyl-

<b>Other names:</b>	5-Methyltridecane
<b>Inchi:</b>	InChI=1S/C14H30/c1-4-6-8-9-10-11-13-14(3)12-7-5-2/h14H,4-13H2,1-3H3
<b>InchiKey:</b>	NFWBQMAWXUZCRJ-UHFFFAOYSA-N
<b>Formula:</b>	C14H30
<b>SMILES:</b>	CCCCCCCCC(C)CCCC
<b>Mol. weight [g/mol]:</b>	198.39
<b>CAS:</b>	25117-31-1

## Physical Properties

Property code	Value	Unit	Source
gf	64.56	kJ/mol	Joback Method
hf	-337.57	kJ/mol	Joback Method
hfus	28.49	kJ/mol	Joback Method
hvap	46.37	kJ/mol	Joback Method
log10ws	-5.44		Crippen Method
logp	5.563		Crippen Method
mcvol	208.120	ml/mol	McGowan Method
pc	1533.06	kPa	Joback Method
rinpol	1354.00		NIST Webbook
rinpol	1355.00		NIST Webbook
rinpol	1355.40		NIST Webbook
rinpol	1348.00		NIST Webbook
rinpol	1348.00		NIST Webbook
rinpol	1355.00		NIST Webbook
rinpol	1348.00		NIST Webbook
rinpol	1351.00		NIST Webbook
rinpol	1348.00		NIST Webbook
rinpol	1354.00		NIST Webbook
rinpol	1354.00		NIST Webbook
ripol	1342.00		NIST Webbook
tb	519.28	K	Joback Method
tc	681.76	K	Joback Method
tf	219.60 ± 2.00	K	NIST Webbook
vc	0.814	m <sup>3</sup> /kmol	Joback Method

# Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	506.07	J/molxK	519.28	Joback Method
cpg	524.54	J/molxK	546.36	Joback Method
cpg	542.30	J/molxK	573.44	Joback Method
cpg	559.36	J/molxK	600.52	Joback Method
cpg	575.74	J/molxK	627.60	Joback Method
cpg	591.46	J/molxK	654.68	Joback Method
cpg	606.55	J/molxK	681.76	Joback Method
dvisc	0.0090478	Paxs	232.54	Joback Method
dvisc	0.0026666	Paxs	280.33	Joback Method
dvisc	0.0011218	Paxs	328.12	Joback Method
dvisc	0.0005882	Paxs	375.91	Joback Method
dvisc	0.0003567	Paxs	423.70	Joback Method
dvisc	0.0002394	Paxs	471.49	Joback Method
dvisc	0.0001730	Paxs	519.28	Joback Method
hvapt	53.80	kJ/mol	451.50	NIST Webbook

## Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
Coeff. A	1.71406e+01
Coeff. B	-6.46713e+03
Coeff. C	-1.77100e+00
Temperature range (K), min.	385.51
Temperature range (K), max.	548.48

## Sources

**Joback Method:**

[https://en.wikipedia.org/wiki/Joback\\_method](https://en.wikipedia.org/wiki/Joback_method)

**McGowan Method:**

<http://link.springer.com/article/10.1007/BF02311772>

**NIST Webbook:**

<http://webbook.nist.gov/cgi/cbook.cgi?ID=C25117311&Units=SI>

**The Yaws Handbook of Vapor Pressure:**

<https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure>

**Crippen Method:**

<http://pubs.acs.org/doi/abs/10.1021/ci990307l>

**Crippen Method:**

[https://www.cheméo.com/doc/models/crippen\\_log10ws](https://www.cheméo.com/doc/models/crippen_log10ws)

## 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>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>rinpol:</b>	Non-polar retention indices
<b>ripol:</b>	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

Latest version available from:

<https://www.cheméo.com/cid/55-406-0/Tridecane-5-methyl.pdf>

Generated by Cheméo on 2024-04-27 21:24:21.996266882 +0000 UTC m=+16542310.916844192.

Cheméo (<https://www.cheméo.com>) is the biggest free database of chemical and physical data for the process industry.