

# 1-Decene, 3,4-dimethyl-

<b>Other names:</b>	3,4-Dimethyl-1-decene
<b>Inchi:</b>	InChI=1S/C12H24/c1-5-7-8-9-10-12(4)11(3)6-2/h6,11-12H,2,5,7-10H2,1,3-4H3
<b>InchiKey:</b>	UQFBFCHTLWVGJAE-UHFFFAOYSA-N
<b>Formula:</b>	C12H24
<b>SMILES:</b>	C=CC(C)C(C)CCCCC
<b>Mol. weight [g/mol]:</b>	168.32
<b>CAS:</b>	50871-03-9

## Physical Properties

Property code	Value	Unit	Source
gf	133.12	kJ/mol	Joback Method
hf	-176.14	kJ/mol	Joback Method
hfus	18.51	kJ/mol	Joback Method
hvap	40.86	kJ/mol	Joback Method
log10ws	-4.22		Crippen Method
logp	4.415		Crippen Method
mcvol	175.640	ml/mol	McGowan Method
pc	1870.79	kPa	Joback Method
ripol	1246.00		NIST Webbook
ripol	1246.00		NIST Webbook
tb	469.76	K	Joback Method
tc	640.47	K	Joback Method
tf	193.24	K	Joback Method
vc	0.676	m3/kmol	Joback Method

## Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	389.18	J/molxK	469.76	Joback Method
cpg	468.02	J/molxK	612.02	Joback Method
cpg	453.59	J/molxK	583.57	Joback Method
cpg	438.51	J/molxK	555.12	Joback Method
cpg	422.76	J/molxK	526.66	Joback Method
cpg	406.33	J/molxK	498.21	Joback Method

cpg	481.83	J/molxK	640.47	Joback Method
dvisc	0.0001942	Paxs	469.76	Joback Method
dvisc	0.0002717	Paxs	423.67	Joback Method
dvisc	0.0004127	Paxs	377.59	Joback Method
dvisc	0.0007042	Paxs	331.50	Joback Method
dvisc	0.0014275	Paxs	285.41	Joback Method
dvisc	0.0037993	Paxs	239.33	Joback Method
dvisc	0.0161289	Paxs	193.24	Joback Method

## Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
Coeff. A	1.52108e+01
Coeff. B	-4.30452e+03
Coeff. C	-7.40760e+01
Temperature range (K), min.	362.52
Temperature range (K), max.	508.90

## Sources

<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=C50871039&amp;Units=SI">http://webbook.nist.gov/cgi/cbook.cgi?ID=C50871039&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>

## 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>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

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