

# 2,3-Dimethyldecane

<b>Other names:</b>	Decane, 2,3-dimethyl
<b>Inchi:</b>	InChI=1S/C12H26/c1-5-6-7-8-9-10-12(4)11(2)3/h11-12H,5-10H2,1-4H3
<b>InchiKey:</b>	ZCTGYLNFWOQVHV-UHFFFAOYSA-N
<b>Formula:</b>	C12H26
<b>SMILES:</b>	CCCCCCCC(C)C(C)C
<b>Mol. weight [g/mol]:</b>	170.33
<b>CAS:</b>	17312-44-6

## Physical Properties

Property code	Value	Unit	Source
gf	45.28	kJ/mol	Joback Method
hf	-301.57	kJ/mol	Joback Method
hfus	19.79	kJ/mol	Joback Method
hvap	41.53	kJ/mol	Joback Method
log10ws	-4.36		Crippen Method
logp	4.639		Crippen Method
mcvol	179.940	ml/mol	McGowan Method
pc	1804.63	kPa	Joback Method
rinpol	1155.00		NIST Webbook
rinpol	1158.00		NIST Webbook
tb	473.08	K	Joback Method
tc	640.63	K	Joback Method
tf	196.60 ± 2.00	K	NIST Webbook
vc	0.696	m <sup>3</sup> /kmol	Joback Method

## Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	502.54	J/mol×K	640.63	Joback Method
cpg	488.21	J/mol×K	612.70	Joback Method
cpg	473.26	J/mol×K	584.78	Joback Method
cpg	457.68	J/mol×K	556.85	Joback Method
cpg	441.45	J/mol×K	528.93	Joback Method
cpg	424.55	J/mol×K	501.00	Joback Method

cpg	406.97	J/mol×K	473.08	Joback Method
dvisc	0.0185767	Paxs	195.00	Joback Method
dvisc	0.0001925	Paxs	473.08	Joback Method
dvisc	0.0002726	Paxs	426.73	Joback Method
dvisc	0.0004202	Paxs	380.39	Joback Method
dvisc	0.0007305	Paxs	334.04	Joback Method
dvisc	0.0015175	Paxs	287.69	Joback Method
dvisc	0.0041744	Paxs	241.35	Joback Method
hvapt	50.00	kJ/mol	424.50	NIST Webbook

## Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
Coeff. A	1.40796e+01
Coeff. B	-3.66943e+03
Coeff. C	-9.13150e+01
Temperature range (K), min.	357.37
Temperature range (K), max.	509.81

## 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=C17312446&amp;Units=SI">http://webbook.nist.gov/cgi/cbook.cgi?ID=C17312446&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>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>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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