

# 1,1-Dichlorodecane

<b>Inchi:</b>	InChI=1S/C10H20Cl2/c1-2-3-4-5-6-7-8-9-10(11)12/h10H,2-9H2,1H3
<b>InchiKey:</b>	IXADHCVQNVXURI-UHFFFAOYSA-N
<b>Formula:</b>	C10H20Cl2
<b>SMILES:</b>	CCCCCCCCC(Cl)Cl
<b>Mol. weight [g/mol]:</b>	211.17
<b>CAS:</b>	3162-62-7

## Physical Properties

Property code	Value	Unit	Source
gf	7.02	kJ/mol	Joback Method
hf	-286.49	kJ/mol	Joback Method
hfus	26.53	kJ/mol	Joback Method
hvap	46.24	kJ/mol	Joback Method
log10ws	-4.92		Crippen Method
logp	4.931		Crippen Method
mvol	176.240	ml/mol	McGowan Method
pc	1985.89	kPa	Joback Method
rinpol	1541.00		NIST Webbook
rinpol	1541.00		NIST Webbook
tb	502.62	K	Joback Method
tc	680.58	K	Joback Method
tf	247.30	K	Joback Method
vc	0.688	m <sup>3</sup> /kmol	Joback Method

## Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	380.49	J/mol×K	502.62	Joback Method
cpg	395.02	J/mol×K	532.28	Joback Method
cpg	408.92	J/mol×K	561.94	Joback Method
cpg	422.19	J/mol×K	591.60	Joback Method
cpg	434.87	J/mol×K	621.26	Joback Method
cpg	446.96	J/mol×K	650.92	Joback Method
cpg	458.49	J/mol×K	680.58	Joback Method

dvisc	0.0067379	Paxs	247.30	Joback Method
dvisc	0.0025564	Paxs	289.85	Joback Method
dvisc	0.0012431	Paxs	332.41	Joback Method
dvisc	0.0007119	Paxs	374.96	Joback Method
dvisc	0.0004568	Paxs	417.51	Joback Method
dvisc	0.0003182	Paxs	460.07	Joback Method
dvisc	0.0002356	Paxs	502.62	Joback Method

## Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
Coeff. A	1.47163e+01
Coeff. B	-4.55034e+03
Coeff. C	-8.57520e+01
Temperature range (K), min.	401.12
Temperature range (K), max.	569.58

## 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=R572526&amp;Units=SI">http://webbook.nist.gov/cgi/cbook.cgi?ID=R572526&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>

## 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<sub>vap</sub>:</b>	Enthalpy of vaporization at standard conditions
<b>log<sub>10</sub>w<sub>s</sub>:</b>	Log10 of Water solubility in mol/l
<b>log<sub>p</sub>:</b>	Octanol/Water partition coefficient
<b>m<sub>cvol</sub>:</b>	McGowan's characteristic volume
<b>p<sub>c</sub>:</b>	Critical Pressure
<b>p<sub>vap</sub>:</b>	Vapor pressure
<b>r<sub>inpol</sub>:</b>	Non-polar retention indices
<b>t<sub>b</sub>:</b>	Normal Boiling Point Temperature
<b>t<sub>c</sub>:</b>	Critical Temperature
<b>t<sub>f</sub>:</b>	Normal melting (fusion) point
<b>v<sub>c</sub>:</b>	Critical Volume

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