

# Butane, 1,3-dichloro-2-methyl-

<b>Other names:</b>	1,3-Dichloro-2-methylbutane
<b>Inchi:</b>	InChI=1S/C5H10Cl2/c1-4(3-6)5(2)7/h4-5H,3H2,1-2H3
<b>InchiKey:</b>	MCAJTVAYCDZHHF-UHFFFAOYSA-N
<b>Formula:</b>	C5H10Cl2
<b>SMILES:</b>	CC(Cl)C(C)CCI
<b>Mol. weight [g/mol]:</b>	141.04
<b>CAS:</b>	23010-07-3

## Physical Properties

Property code	Value	Unit	Source
gf	-37.52	kJ/mol	Joback Method
hf	-188.57	kJ/mol	Joback Method
hfus	10.05	kJ/mol	Joback Method
hvap	34.72	kJ/mol	Joback Method
log10ws	-2.09		Crippen Method
logp	2.489		Crippen Method
mcvol	105.790	ml/mol	McGowan Method
pc	3243.03	kPa	Joback Method
rinpol	874.00		NIST Webbook
rinpol	869.00		NIST Webbook
tb	387.78	K	Joback Method
tc	577.75	K	Joback Method
tf	175.95	K	Joback Method
vc	0.402	m3/kmol	Joback Method

## Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	175.68	J/molxK	387.78	Joback Method
cpg	185.11	J/molxK	419.44	Joback Method
cpg	194.11	J/molxK	451.10	Joback Method
cpg	202.69	J/molxK	482.77	Joback Method
cpg	210.87	J/molxK	514.43	Joback Method
cpg	218.66	J/molxK	546.09	Joback Method

cpg	226.08	J/mol×K	577.75	Joback Method
dvisc	0.0132129	Paxs	175.95	Joback Method
dvisc	0.0042286	Paxs	211.25	Joback Method
dvisc	0.0018754	Paxs	246.56	Joback Method
dvisc	0.0010197	Paxs	281.87	Joback Method
dvisc	0.0006349	Paxs	317.17	Joback Method
dvisc	0.0004347	Paxs	352.48	Joback Method
dvisc	0.0003189	Paxs	387.78	Joback Method

## Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
Coeff. A	1.47169e+01
Coeff. B	-3.69507e+03
Coeff. C	-5.68400e+01
Temperature range (K), min.	312.92
Temperature range (K), max.	449.70

## 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=C23010073&amp;Units=SI">http://webbook.nist.gov/cgi/cbook.cgi?ID=C23010073&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>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>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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