

# Benzene, 1,1'-butylidenebis-

<b>Other names:</b>	1,1-Diphenylbutane
<b>Inchi:</b>	InChI=1S/C16H18/c1-2-9-16(14-10-5-3-6-11-14)15-12-7-4-8-13-15/h3-8,10-13,16H,2,9H
<b>InchiKey:</b>	SZFDQMKAGLCYPA-UHFFFAOYSA-N
<b>Formula:</b>	C16H18
<b>SMILES:</b>	CCCC(c1ccccc1)c1ccccc1
<b>Mol. weight [g/mol]:</b>	210.31
<b>CAS:</b>	719-79-9

## Physical Properties

Property code	Value	Unit	Source
chl	-8901.50	kJ/mol	NIST Webbook
chl	-8912.00	kJ/mol	NIST Webbook
gf	306.22	kJ/mol	Joback Method
hf	94.21	kJ/mol	Joback Method
hfus	21.76	kJ/mol	Joback Method
hvap	77.20 ± 0.60	kJ/mol	NIST Webbook
log10ws	-4.79		Crippen Method
logp	4.619		Crippen Method
mcvol	188.780	ml/mol	McGowan Method
pc	2302.53	kPa	Joback Method
tb	568.44 ± 0.20	K	NIST Webbook
tb	560.20	K	NIST Webbook
tb	567.44 ± 0.50	K	NIST Webbook
tb	560.00 ± 4.00	K	NIST Webbook
tb	560.00 ± 4.00	K	NIST Webbook
tc	853.40	K	Joback Method
tf	248.00 ± 0.30	K	NIST Webbook
vc	0.710	m <sup>3</sup> /kmol	Joback Method

## Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	472.73	J/mol×K	618.40	Joback Method
cpg	491.86	J/mol×K	657.57	Joback Method

cpg	509.59	J/molxK	696.73	Joback Method
cpg	525.99	J/molxK	735.90	Joback Method
cpg	541.15	J/molxK	775.06	Joback Method
cpg	555.14	J/molxK	814.23	Joback Method
cpg	568.06	J/molxK	853.40	Joback Method
dvisc	0.0032193	Paxs	307.92	Joback Method
dvisc	0.0013116	Paxs	359.67	Joback Method
dvisc	0.0006698	Paxs	411.41	Joback Method
dvisc	0.0003975	Paxs	463.16	Joback Method
dvisc	0.0002620	Paxs	514.91	Joback Method
dvisc	0.0001863	Paxs	566.65	Joback Method
dvisc	0.0001403	Paxs	618.40	Joback Method
hvapt	75.90 ± 0.60	kJ/mol	320.00	NIST Webbook

## Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
Coeff. A	1.41152e+01
Coeff. B	-4.40732e+03
Coeff. C	-9.61180e+01
Temperature range (K), min.	414.85
Temperature range (K), max.	596.74

## 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=C719799&amp;Units=SI">http://webbook.nist.gov/cgi/cbook.cgi?ID=C719799&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>chl:</b>	Standard liquid enthalpy of combustion
<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>hvac:</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>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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