

# Benzene, (4-methylpentyl)-

<b>Other names:</b>	(4-Methylpentyl)benzene 4-methyl-1-phenylpentane
<b>Inchi:</b>	InChI=1S/C12H18/c1-11(2)7-6-10-12-8-4-3-5-9-12/h3-5,8-9,11H,6-7,10H2,1-2H3
<b>InchiKey:</b>	SUMOGCZUNXXYRP-UHFFFAOYSA-N
<b>Formula:</b>	C12H18
<b>SMILES:</b>	CC(C)CCCc1ccccc1
<b>Mol. weight [g/mol]:</b>	162.27
<b>CAS:</b>	4215-86-5

## Physical Properties

Property code	Value	Unit	Source
gf	160.13	kJ/mol	Joback Method
hf	-59.76	kJ/mol	Joback Method
hfus	17.35	kJ/mol	Joback Method
hvap	44.19	kJ/mol	Joback Method
log10ws	-3.71		Crippen Method
logp	3.665		Crippen Method
mvol	156.180	ml/mol	McGowan Method
pc	2424.27	kPa	Joback Method
rinpol	1210.00		NIST Webbook
rinpol	1210.00		NIST Webbook
rinpol	1147.00		NIST Webbook
tb	500.20	K	Joback Method
tc	703.92	K	Joback Method
tf	236.42	K	Joback Method
vc	0.594	m <sup>3</sup> /kmol	Joback Method

## Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	345.64	J/molxK	500.20	Joback Method
cpg	362.97	J/molxK	534.15	Joback Method
cpg	379.35	J/molxK	568.11	Joback Method
cpg	394.81	J/molxK	602.06	Joback Method

cpg	409.40	J/molxK	636.01	Joback Method
cpg	423.14	J/molxK	669.96	Joback Method
cpg	436.08	J/molxK	703.92	Joback Method
dvisc	0.0057131	Paxs	236.42	Joback Method
dvisc	0.0020964	Paxs	280.38	Joback Method
dvisc	0.0010095	Paxs	324.35	Joback Method
dvisc	0.0005788	Paxs	368.31	Joback Method
dvisc	0.0003736	Paxs	412.27	Joback Method
dvisc	0.0002624	Paxs	456.24	Joback Method
dvisc	0.0001961	Paxs	500.20	Joback Method

## Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
Coeff. A	1.47574e+01
Coeff. B	-4.18480e+03
Coeff. C	-7.74120e+01
Temperature range (K), min.	366.62
Temperature range (K), max.	520.44

## 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=C4215865&amp;Units=SI">http://webbook.nist.gov/cgi/cbook.cgi?ID=C4215865&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/ci990307I">http://pubs.acs.org/doi/abs/10.1021/ci990307I</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>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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