

1-Pentene, 5-bromo-

Other names:	1-Bromo-4-pentene 4-Pentenyl bromide 5-Bromo-1-pentene 5-Bromopentene 5-bromopent-1-ene
Inchi:	InChI=1S/C5H9Br/c1-2-3-4-5-6/h2H,1,3-5H2
InchiKey:	LPNANKDXVBMDKE-UHFFFAOYSA-N
Formula:	C5H9Br
SMILES:	C=CCCCBr
Mol. weight [g/mol]:	149.03
CAS:	1119-51-3

Physical Properties

Property code	Value	Unit	Source
gf	93.38	kJ/mol	Joback Method
hf	5.23	kJ/mol	Joback Method
hfus	12.71	kJ/mol	Joback Method
hvap	32.49	kJ/mol	Joback Method
ie	9.60	eV	NIST Webbook
log10ws	-2.20		Crippen Method
logp	2.348		Crippen Method
mcvol	94.510	ml/mol	McGowan Method
pc	3970.51	kPa	Joback Method
tb	376.64	K	Joback Method
tc	565.50	K	Joback Method
tf	204.15	K	Joback Method
vc	0.358	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	147.48	J/mol×K	376.64	Joback Method
cpg	186.48	J/mol×K	534.02	Joback Method
cpg	179.48	J/mol×K	502.55	Joback Method

cpg	172.09	J/mol×K	471.07	Joback Method
cpg	164.31	J/mol×K	439.59	Joback Method
cpg	156.11	J/mol×K	408.12	Joback Method
cpg	193.12	J/mol×K	565.50	Joback Method
dvisc	0.0003504	Pa×s	376.64	Joback Method
dvisc	0.0004364	Pa×s	347.89	Joback Method
dvisc	0.0005655	Pa×s	319.14	Joback Method
dvisc	0.0007714	Pa×s	290.39	Joback Method
dvisc	0.0011265	Pa×s	261.65	Joback Method
dvisc	0.0018064	Pa×s	232.90	Joback Method
dvisc	0.0033085	Pa×s	204.15	Joback Method

Pressure Dependent Properties

Property code	Value	Unit	Pressure [kPa]	Source
tbrp	399.70	K	102.00	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
Coeff. A	1.39785e+01
Coeff. B	-2.83624e+03
Coeff. C	-9.66880e+01
Temperature range (K), min.	303.85
Temperature range (K), max.	423.93

Sources

Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
Joback Method:	https://en.wikipedia.org/wiki/Joback_method
McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C1119513&Units=SI
The Yaws Handbook of Vapor Pressure:	https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure

Legend

cpg:	Ideal gas heat capacity
dvisc:	Dynamic viscosity
gf:	Standard Gibbs free energy of formation
hf:	Enthalpy of formation at standard conditions
hfus:	Enthalpy of fusion at standard conditions
hvap:	Enthalpy of vaporization at standard conditions
ie:	Ionization energy
log10ws:	Log10 of Water solubility in mol/l
logp:	Octanol/Water partition coefficient
mcvol:	McGowan's characteristic volume
pc:	Critical Pressure
pvap:	Vapor pressure
tb:	Normal Boiling Point Temperature
tbrp:	Boiling point at reduced pressure
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

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