3-ethyl-1-pentyne

Inchi: InChI=1S/C7H12/c1-4-7(5-2)6-3/h1,7H,5-6H2,2-3H3
InchiKey: WGWGXWSBPXLXTA-UHFFFAOYSA-N
Formula: C7H12
SMILES: C#CC(CC)CC
Mol. weight [g/mol]: 96.17
CAS: 21020-26-8

Physical Properties

Property code	Value	Unit	Source
gf	228.69	kJ/mol	Joback Method
hf	98.81	kJ/mol	Joback Method
hfus	13.34	kJ/mol	Joback Method
hvap	30.65	kJ/mol	Joback Method
log10ws	-2.31		Crippen Method
logp	2.056		Crippen Method
mcvol	100.890	ml/mol	McGowan Method
pc	3325.84	kPa	Joback Method
tb	360.15 ± 2.00	K	NIST Webbook
tb	361.00 ± 3.00	K	NIST Webbook
tc	528.78	K	Joback Method
tf	200.62	K	Joback Method
vc	0.384	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	171.87	J/mol×K	349.24	Joback Method
cpg	182.56	J/mol×K	379.16	Joback Method
cpg	192.80	J/mol×K	409.09	Joback Method
cpg	202.59	J/mol×K	439.01	Joback Method
cpg	211.96	J/mol×K	468.93	Joback Method
cpg	220.92	J/mol×K	498.86	Joback Method
cpg	229.49	J/mol×K	528.78	Joback Method

Sources

Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
Joback Method:	https://en.wikipedia.org/wiki/Joback_method
KDB:	https://www.cheric.org/files/research/kdb/mol/mol423.mol
McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C21020268&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l

Legend

cpg:	Ideal gas heat capacity
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
log10ws:	Log10 of Water solubility in mol/l
logp:	Octanol/Water partition coefficient
mcvol:	McGowan's characteristic volume
pc:	Critical Pressure
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume