2-Pentanone, 3-ethyl-3-methyl-

Other names: 3-Ethyl-3-methyl-2-pentanone
Inchi: InChI=1S/C8H16O/c1-5-8(4,6-2)7(3)9/h5-6H2,1-4H3
InchiKey: VMQCHWRZCMKYGA-UHFFFAOYSA-N
Formula: C8H16O
SMILES: CCC(C)(CC)C(C)=O
Mol. weight [g/mol]: 128.21
CAS: 19780-65-5

Physical Properties

Property code	Value	Unit	Source
gf	-109.60	kJ/mol	Joback Method
hf	-329.78	kJ/mol	Joback Method
hfus	10.66	kJ/mol	Joback Method
hvap	38.85	kJ/mol	Joback Method
log10ws	-2.21		Crippen Method
logp	2.402		Crippen Method
mcvol	125.150	ml/mol	McGowan Method
pc	2758.46	kPa	Joback Method
tb	426.00 ± 3.00	K	NIST Webbook
tb	427.20	K	NIST Webbook
tc	619.80	K	Joback Method
tf	232.27	K	Joback Method
vc	0.478	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	257.73	J/mol×K	433.08	Joback Method
cpg	271.54	J/mol×K	464.20	Joback Method
cpg	284.66	J/mol×K	495.32	Joback Method
cpg	297.11	J/mol×K	526.44	Joback Method
cpg	308.91	J/mol×K	557.56	Joback Method
cpg	320.09	J/mol×K	588.68	Joback Method
cpg	330.68	J/mol×K	619.80	Joback Method

dvisc	0.0068051	Pa×s	232.27	Joback Method
dvisc	0.0029357	Pa×s	265.74	Joback Method
dvisc	0.0015286	Pa×s	299.21	Joback Method
dvisc	0.0009076	Pa×s	332.67	Joback Method
dvisc	0.0005927	Pa×s	366.14	Joback Method
dvisc	0.0004158	Pa×s	399.61	Joback Method
dvisc	0.0003081	Pa×s	433.08	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.49652e+01
Coeff. B	-3.80203e+03
Coeff. C	-5.97450e+01
Temperature range (K), min.	318.78
Temperature range (K), max.	453.58

Sources

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C19780655&Units=SI

The Yaws Handbook of Vapor Pressure: https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure

Crippen Method: http://pubs.acs.org/doi/abs/10.1021/ci990307l

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

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
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
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume