3,5-Dimethyl-4-heptanone

Other names:	3,5-dimethylheptan-4-one
	4-Heptanone, 3,5-dimethyl-
Inchi:	InChI=1S/C9H18O/c1-5-7(3)9(10)8(4)6-2/h7-8H,5-6H2,1-4H3
InchiKey:	VZXXYILNWWRSGE-UHFFFAOYSA-N
Formula:	C9H18O
SMILES:	CCC(C)C(=O)C(C)CC
Mol. weight [g/mol]:	142.24
CAS:	19549-84-9

Physical Properties

Property code	Value	Unit	Source
gf	-108.90	kJ/mol	Joback Method
hf	-352.23	kJ/mol	Joback Method
hfus	13.62	kJ/mol	Joback Method
hvap	41.60	kJ/mol	Joback Method
log10ws	-2.39		Crippen Method
logp	2.648		Crippen Method
mcvol	139.240	ml/mol	McGowan Method
pc	2492.52	kPa	Joback Method
tb	435.00 ± 4.00	K	NIST Webbook
tb	435.20	K	NIST Webbook
tc	640.10	K	Joback Method
tf	211.12	K	Joback Method
vc	0.533	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	297.92	J/mol×K	458.31	Joback Method
cpg	312.19	J/mol×K	488.61	Joback Method
cpg	325.86	J/mol×K	518.91	Joback Method
cpg	338.94	J/mol×K	549.20	Joback Method
cpg	351.45	J/mol×K	579.50	Joback Method
cpg	363.40	J/mol×K	609.80	Joback Method

cpg	374.81	J/mol×K	640.10	Joback Method
dvisc	0.0112700	Pa×s	211.12	Joback Method
dvisc	0.0035885	Pa×s	252.32	Joback Method
dvisc	0.0015755	Pa×s	293.52	Joback Method
dvisc	0.0008471	Pa×s	334.72	Joback Method
dvisc	0.0005218	Pa×s	375.91	Joback Method
dvisc	0.0003537	Pa×s	417.11	Joback Method
dvisc	0.0002572	Pa×s	458.31	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.50321e+01
Coeff. B	-3.88515e+03
Coeff. C	-6.21220e+01
Temperature range (K), min.	325.62
Temperature range (K), max.	461.80

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=C19549849&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

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