3,4-Decadiene

Other names: 3,4-Nonadiene
Inchi: InChI=1S/C10H18/c1-3-5-7-9-10-8-6-4-2/h5,9H,3-4,6,8,10H2,1-2H3
InchiKey: ZLEWGEATDZBCIM-UHFFFAOYSA-N
Formula: C10H18
SMILES: CCC=C=CCCCCC
Mol. weight [g/mol]: 138.25
CAS: 37050-04-7

Physical Properties

Property code	Value	Unit	Source
gf	241.82	kJ/mol	Joback Method
hf	30.27	kJ/mol	Joback Method
hfus	23.99	kJ/mol	Joback Method
hvap	38.25	kJ/mol	Joback Method
log10ws	-3.74		Crippen Method
logp	3.688		Crippen Method
mcvol	143.160	ml/mol	McGowan Method
pc	2417.12	kPa	Joback Method
tb	435.63	K	Joback Method
tc	616.18	K	Joback Method
tf	203.89	K	Joback Method
vc	0.555	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	289.07	J/mol×K	435.63	Joback Method
cpg	303.38	J/mol×K	465.72	Joback Method
cpg	317.12	J/mol×K	495.81	Joback Method
cpg	330.29	J/mol×K	525.91	Joback Method
cpg	342.91	J/mol×K	556.00	Joback Method
cpg	355.01	J/mol×K	586.09	Joback Method
cpg	366.59	J/mol×K	616.18	Joback Method

Sources

McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C37050047&Units=SI
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

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