

5-Octadecene, (E)-

Other names:	(5E)-5-Octadecene (E)-5-Octadecene trans-5-Octadecene
Inchi:	InChI=1S/C18H36/c1-3-5-7-9-11-13-15-17-18-16-14-12-10-8-6-4-2/h9,11H,3-8,10,12-18H
InchiKey:	YIYQJOMDMPTKEL-PKQNBQFBNSA-N
Formula:	C18H36
SMILES:	CCCCC=CCCCCCCCCCCCC
Mol. weight [g/mol]:	252.48
CAS:	7206-21-5

Physical Properties

Property code	Value	Unit	Source
gf	180.90	kJ/mol	Joback Method
hf	-297.63	kJ/mol	Joback Method
hfus	42.58	kJ/mol	Joback Method
hvap	55.62	kJ/mol	Joback Method
log10ws	-7.21		Crippen Method
logp	7.044		Crippen Method
mcvol	260.180	ml/mol	McGowan Method
pc	1194.00	kPa	Joback Method
ripol	1811.00		NIST Webbook
ripol	1811.00		NIST Webbook
ripol	1811.20		NIST Webbook
tb	615.40	K	Joback Method
tc	779.04	K	Joback Method
tf	287.54	K	Joback Method
vc	1.024	m ³ /kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	704.15	J/mol×K	615.40	Joback Method
cpg	723.88	J/mol×K	642.67	Joback Method
cpg	742.80	J/mol×K	669.95	Joback Method

cpg	760.91	J/molxK	697.22	Joback Method
cpg	778.26	J/molxK	724.50	Joback Method
cpg	794.87	J/molxK	751.77	Joback Method
cpg	810.77	J/molxK	779.04	Joback Method
dvisc	0.0041393	Paxs	287.54	Joback Method
dvisc	0.0013772	Paxs	342.18	Joback Method
dvisc	0.0006204	Paxs	396.83	Joback Method
dvisc	0.0003390	Paxs	451.47	Joback Method
dvisc	0.0002111	Paxs	506.11	Joback Method
dvisc	0.0001441	Paxs	560.76	Joback Method
dvisc	0.0001053	Paxs	615.40	Joback Method

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C7206215&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci9903071
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
ripol:	Polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

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