1,trans-3-decadiene

Inchi: InChI=1S/C10H18/c1-3-5-7-9-10-8-6-4-2/h3,5,7H,1,4,6,8-10H2,2H3/b7-5+
InchiKey: YHHHHJCAVQSFMJ-FNORWQNLSA-N
Formula: C10H18
SMILES: C=CC=CCCCCCC
Mol. weight [g/mol]: 138.25

Physical Properties

Property code	Value	Unit	Source
gf	201.38	kJ/mol	Joback Method
hf	-7.08	kJ/mol	Joback Method
hfus	20.58	kJ/mol	Joback Method
hvap	37.14	kJ/mol	Joback Method
log10ws	-3.72		Crippen Method
logp	3.699		Crippen Method
mcvol	143.160	ml/mol	McGowan Method
pc	2302.53	kPa	Joback Method
rinpol	1008.50		NIST Webbook
tb	429.04	K	Joback Method
tc	602.67	K	Joback Method
tf	195.62	K	Joback Method
vc	0.556	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	284.09	J/mol×K	429.04	Joback Method
cpg	298.55	J/mol×K	457.98	Joback Method
cpg	312.35	J/mol×K	486.92	Joback Method
cpg	325.53	J/mol×K	515.86	Joback Method
cpg	338.11	J/mol×K	544.80	Joback Method
cpg	350.10	J/mol×K	573.73	Joback Method
cpg	361.55	J/mol×K	602.67	Joback Method
dvisc	0.0049613	Pa×s	195.62	Joback Method
dvisc	0.0018503	Pa×s	234.52	Joback Method

dvisc	0.0009137	Pa×s	273.43	Joback Method
dvisc	0.0005379	Pa×s	312.33	Joback Method
dvisc	0.0003561	Pa×s	351.23	Joback Method
dvisc	0.0002559	Pa×s	390.14	Joback Method
dvisc	0.0001953	Pa×s	429.04	Joback Method

Sources

McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=R249657&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
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
rinpol:	Non-polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume