

1,trans-5-decadiene

Inchi:	InChI=1S/C10H18/c1-3-5-7-9-10-8-6-4-2/h3,9-10H,1,4-8H2,2H3/b10-9+
InchiKey:	CNCHKZTUPHZPHA-MDZDMXLPSA-N
Formula:	C10H18
SMILES:	C=CCCC=CCCC
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
rinpola	964.00		NIST Webbook
tb	429.04	K	Joback Method
tc	602.67	K	Joback Method
tf	195.62	K	Joback Method
vc	0.556	m ³ /kmol	Joback Method

Temperature Dependent Properties

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

dvisc	0.0009137	Paxs	273.43	Joback Method
dvisc	0.0005379	Paxs	312.33	Joback Method
dvisc	0.0003561	Paxs	351.23	Joback Method
dvisc	0.0002559	Paxs	390.14	Joback Method
dvisc	0.0001953	Paxs	429.04	Joback Method

Sources

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
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=R249697&Units=SI

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

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