

trans-3,trans-7-decadiene

Inchi:	InChI=1S/C10H18/c1-3-5-7-9-10-8-6-4-2/h5-8H,3-4,9-10H2,1-2H3/b7-5+,8-6+
InchiKey:	LCSLWNXVIDKVGD-KQQUZDAGSA-N
Formula:	C10H18
SMILES:	CCC=CCCC=CCC
Mol. weight [g/mol]:	138.25

Physical Properties

Property code	Value	Unit	Source
gf	193.76	kJ/mol	Joback Method
hf	-15.29	kJ/mol	Joback Method
hfus	22.06	kJ/mol	Joback Method
hvap	37.77	kJ/mol	Joback Method
log10ws	-3.72		Crippen Method
logp	3.699		Crippen Method
mcvol	143.160	ml/mol	McGowan Method
pc	2324.78	kPa	Joback Method
rinpol	972.30		NIST Webbook
tb	436.52	K	Joback Method
tc	614.98	K	Joback Method
tf	192.30	K	Joback Method
vc	0.555	m ³ /kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	285.06	J/molxK	436.52	Joback Method
cpg	299.83	J/molxK	466.26	Joback Method
cpg	313.89	J/molxK	496.01	Joback Method
cpg	327.27	J/molxK	525.75	Joback Method
cpg	340.00	J/molxK	555.49	Joback Method
cpg	352.10	J/molxK	585.24	Joback Method
cpg	363.62	J/molxK	614.98	Joback Method
dvisc	0.0054554	Paxs	192.30	Joback Method
dvisc	0.0018265	Paxs	233.00	Joback Method

dvisc	0.0008467	Paxs	273.71	Joback Method
dvisc	0.0004790	Paxs	314.41	Joback Method
dvisc	0.0003088	Paxs	355.11	Joback Method
dvisc	0.0002178	Paxs	395.82	Joback Method
dvisc	0.0001640	Paxs	436.52	Joback Method

Sources

McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=R250256&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

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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