trans,trans-1,6-Cyclodecadiene

Inchi: InChI=1S/C10H16/c1-2-4-6-8-10-9-7-5-3-1/h1-2,9-10H,3-8H2/b2-1+,10-9+
InchiKey: GWCMUONZBWHLRN-LLGXEZKASA-N
Formula: C10H16
SMILES: C1=CCCCC=CCCC1
Mol. weight [g/mol]: 136.23
CAS: 15840-81-0

Physical Properties

Property code	Value	Unit	Source
gf	77.00	kJ/mol	Joback Method
hf	-84.15	kJ/mol	Joback Method
hfus	6.46	kJ/mol	Joback Method
hvap	39.86	kJ/mol	Joback Method
ie	8.05	eV	NIST Webbook
log10ws	-3.61		Crippen Method
logp	3.453		Crippen Method
mcvol	132.300	ml/mol	McGowan Method
pc	3199.16	kPa	Joback Method
rinpol	1084.00		NIST Webbook
tb	467.82	K	Joback Method
tc	703.55	K	Joback Method
tf	201.52	K	Joback Method
vc	0.469	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	268.70	J/mol×K	467.82	Joback Method
cpg	290.00	J/mol×K	507.11	Joback Method
cpg	310.09	J/mol×K	546.40	Joback Method
cpg	328.97	J/mol×K	585.69	Joback Method
cpg	346.67	J/mol×K	624.97	Joback Method
cpg	363.19	J/mol×K	664.26	Joback Method
cpg	378.55	J/mol×K	703.55	Joback Method

dvisc	0.0788658	Pa×s	201.52	Joback Method
dvisc	0.0101791	Pa×s	245.90	Joback Method
dvisc	0.0024571	Pa×s	290.29	Joback Method
dvisc	0.0008647	Pa×s	334.67	Joback Method
dvisc	0.0003886	Pa×s	379.05	Joback Method
dvisc	0.0002065	Pa×s	423.44	Joback Method
dvisc	0.0001238	Pa×s	467.82	Joback Method

Sources

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=C15840810&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws

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
ie:	Ionization energy
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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