

1,5-Cyclododecadiene, (E,Z)-

Other names:	trans,cis-1,5-Cyclododecadiene (E,Z)-1,5-Cyclododecadiene c,t-Cyclododeca-1,5-diene cis,trans-1,5-Cyclododecadiene
Inchi:	InChI=1S/C12H20/c1-2-4-6-8-10-12-11-9-7-5-3-1/h1-2,7,9H,3-6,8,10-12H2/b2-1-,9-7+
InchiKey:	KEMUGHMYINTXKW-UYIJSCIWSA-N
Formula:	C12H20
SMILES:	C1=CCCCCCCC=CCC1
Mol. weight [g/mol]:	164.29
CAS:	19428-99-0

Physical Properties

Property code	Value	Unit	Source
gf	69.64	kJ/mol	Joback Method
hf	-137.75	kJ/mol	Joback Method
hfus	7.44	kJ/mol	Joback Method
hvap	44.66	kJ/mol	Joback Method
log10ws	-4.45		Crippen Method
logp	4.233		Crippen Method
mcvol	160.480	ml/mol	McGowan Method
pc	2741.15	kPa	Joback Method
rinpol	1346.00		NIST Webbook
rinpol	1364.00		NIST Webbook
rinpol	1356.00		NIST Webbook
tb	522.12	K	Joback Method
tc	767.68	K	Joback Method
tf	217.02	K	Joback Method
vc	0.566	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	365.45	J/molxK	522.12	Joback Method
cpg	390.85	J/molxK	563.05	Joback Method

cpg	414.69	J/molxK	603.97	Joback Method
cpg	436.97	J/molxK	644.90	Joback Method
cpg	457.70	J/molxK	685.83	Joback Method
cpg	476.87	J/molxK	726.75	Joback Method
cpg	494.48	J/molxK	767.68	Joback Method
dvisc	0.1459004	Paxs	217.02	Joback Method
dvisc	0.0115346	Paxs	267.87	Joback Method
dvisc	0.0020493	Paxs	318.72	Joback Method
dvisc	0.0005857	Paxs	369.57	Joback Method
dvisc	0.0002267	Paxs	420.42	Joback Method
dvisc	0.0001077	Paxs	471.27	Joback Method
dvisc	0.0000591	Paxs	522.12	Joback Method

Sources

McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C19428990&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
rinpola:	Non-polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

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