Cyclobutane, 1,2-bis(1-methylethenyl)-, trans-

Other names: trans-1,2-bis-(1-methylethenyl)cyclobutane
Inchi: InChI=1S/C10H16/c1-7(2)9-5-6-10(9)8(3)4/h9-10H,1,3,5-6H2,2,4H3/t9-,10-/m1/s1
InchiKey: RQGIFUXHHWOXNT-NXEZZACHSA-N
Formula: C10H16
SMILES: C=C(C)C1CCC1C(=C)C
Mol. weight [g/mol]: 136.23
CAS: 19465-02-2

Physical Properties

Property code	Value	Unit	Source
gf	232.84	kJ/mol	Joback Method
hf	27.85	kJ/mol	Joback Method
hfus	13.58	kJ/mol	Joback Method
hvap	36.45	kJ/mol	Joback Method
log10ws	-3.13		Crippen Method
logp	3.165		Crippen Method
mcvol	132.300	ml/mol	McGowan Method
pc	2597.78	kPa	Joback Method
ripol	1238.00		NIST Webbook
tb	427.66	K	Joback Method
tc	624.88	K	Joback Method
tf	181.20	K	Joback Method
vc	0.507	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	267.48	J/mol×K	427.66	Joback Method
cpg	284.81	J/mol×K	460.53	Joback Method
cpg	301.22	J/mol×K	493.40	Joback Method
cpg	316.74	J/mol×K	526.27	Joback Method
cpg	331.40	J/mol×K	559.14	Joback Method
cpg	345.26	J/mol×K	592.01	Joback Method
cpg	358.35	J/mol×K	624.88	Joback Method

Sources

McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C19465022&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
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
ripol:	Polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume