Benzene, 1,1'-(1,2-cyclobutanediyl)bis-, trans-

Other names: trans-1,2-Diphenylcyclobutane
(2-Phenylcyclobutyl)benzene,(E)-
Inchi: InChI=1S/C16H16/c1-3-7-13(8-4-1)15-11-12-16(15)14-9-5-2-6-10-14/h1-10,15-16H,11-12
InchiKey: AERGGMDNGDDGPI-HZPDHXFCSA-N
Formula: C16H16
SMILES: c1ccc(C2CCC2c2ccccc2)cc1
Mol. weight [g/mol]: 208.30
CAS: 20071-09-4

Physical Properties

Property code	Value	Unit	Source
gf	349.60	kJ/mol	Joback Method
hf	145.79	kJ/mol	Joback Method
hfus	22.38	kJ/mol	Joback Method
hvap	55.54	kJ/mol	Joback Method
ie	8.20 ± 0.10	eV	NIST Webbook
log10ws	-4.55		Crippen Method
logp	4.348		Crippen Method
mcvol	177.920	ml/mol	McGowan Method
pc	2576.72	kPa	Joback Method
rinpol	1720.00		NIST Webbook
tb	625.18	K	Joback Method
tc	881.09	K	Joback Method
tf	333.10	K	Joback Method
vc	0.663	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	461.63	J/mol×K	625.18	Joback Method
cpg	550.39	J/mol×K	838.44	Joback Method
cpg	535.66	J/mol×K	795.79	Joback Method
cpg	519.54	J/mol×K	753.14	Joback Method
cpg	501.91	J/mol×K	710.48	Joback Method

cpg	482.65	J/mol×K	667.83	Joback Method
cpg	563.88	J/mol×K	881.09	Joback Method
dvisc	0.0003289	Pa×s	625.18	Joback Method
dvisc	0.0003938	Pa×s	576.50	Joback Method
dvisc	0.0004875	Pa×s	527.82	Joback Method
dvisc	0.0006302	Pa×s	479.14	Joback Method
dvisc	0.0008633	Pa×s	430.46	Joback Method
dvisc	0.0012816	Pa×s	381.78	Joback Method
dvisc	0.0021353	Pa×s	333.10	Joback Method

Sources

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
McGowan Method: http://link.springer.com/article/10.1007/BF02311772
NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C20071094&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
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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