Benzene, 1,1',1''-ethylidynetris-

Other names: Ethane, 1,1,1-triphenyl-
1,1,1-Triphenylethane
Inchi: InChI=1S/C20H18/c1-20(17-11-5-2-6-12-17,18-13-7-3-8-14-18)19-15-9-4-10-16-19/h2-16
InchiKey: QIDUHGHFWAMMPV-UHFFFAOYSA-N
Formula: C20H18
SMILES: CC(c1ccccc1)(c1ccccc1)c1ccccc1
Mol. weight [g/mol]: 258.36
CAS: 5271-39-6

Physical Properties

Property code	Value	Unit	Source
gf	457.59	kJ/mol	Joback Method
hf	244.71	kJ/mol	Joback Method
hfus	22.27	kJ/mol	Joback Method
hvap	65.65	kJ/mol	Joback Method
log10ws	-5.38		Crippen Method
logp	5.041		Crippen Method
mcvol	221.380	ml/mol	McGowan Method
pc	2212.45	kPa	Joback Method
tb	733.81	K	Joback Method
tc	1006.17	K	Joback Method
tf	367.40 ± 0.60	K	NIST Webbook
tf	367.60 ± 2.00	K	NIST Webbook
tf	368.05 ± 0.30	K	NIST Webbook
tf	367.45 ± 0.20	K	NIST Webbook
tf	366.00 ± 4.00	K	NIST Webbook
tf	367.90 ± 3.00	K	NIST Webbook
vc	0.821	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	606.48	J/mol×K	733.81	Joback Method
cpg	625.80	J/mol×K	779.20	Joback Method

cpg	643.25	J/mol×K	824.60	Joback Method
cpg	659.05	J/mol×K	869.99	Joback Method
cpg	673.41	J/mol×K	915.38	Joback Method
cpg	686.53	J/mol×K	960.78	Joback Method
cpg	698.63	J/mol×K	1006.17	Joback Method
dvisc	0.0015538	Pa×s	396.84	Joback Method
dvisc	0.0007039	Pa×s	453.00	Joback Method
dvisc	0.0003798	Pa×s	509.16	Joback Method
dvisc	0.0002316	Pa×s	565.33	Joback Method
dvisc	0.0001545	Pa×s	621.49	Joback Method
dvisc	0.0001102	Pa×s	677.65	Joback Method
dvisc	0.0000827	Pa×s	733.81	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=C5271396&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
log10ws:	Log10 of Water solubility in mol/l
logp:	Octanol/Water partition coefficient
mcvol:	McGowan's characteristic volume
pc:	Critical Pressure
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume