Benzene, 1,1',1'',1'''-(1-propyn-1-yl-3-ylidyne)tetrakis-

Other names: Propyne, tetraphenyl-
Inchi: InChI=1S/C27H20/c1-5-13-23(14-6-1)21-22-27(24-15-7-2-8-16-24,25-17-9-3-10-18-25)26
InchiKey: VXFRQOLYYOGJNU-UHFFFAOYSA-N
Formula: C27H20
SMILES: C(#CC(c1ccccc1)(c1ccccc1)c1ccccc1)c1ccccc1
Mol. weight [g/mol]: 344.45
CAS: 20143-13-9

Physical Properties

Property code	Value	Unit	Source
gf	831.74	kJ/mol	Joback Method
hf	609.06	kJ/mol	Joback Method
hfus	37.56	kJ/mol	Joback Method
hvap	85.66	kJ/mol	Joback Method
ie	8.20 ± 0.08	eV	NIST Webbook
log10ws	-7.31		Crippen Method
logp	6.073		Crippen Method
mcvol	287.650	ml/mol	McGowan Method
pc	1878.90	kPa	Joback Method
tb	929.65	K	Joback Method
tc	1232.95	K	Joback Method
tf	608.25	K	Joback Method
vc	1.067	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	854.62	J/mol×K	929.65	Joback Method
cpg	872.10	J/mol×K	980.20	Joback Method
cpg	888.11	J/mol×K	1030.75	Joback Method
cpg	903.01	J/mol×K	1081.30	Joback Method
cpg	917.15	J/mol×K	1131.85	Joback Method
cpg	930.90	J/mol×K	1182.40	Joback Method
cpg	944.61	J/mol×K	1232.95	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=C20143139&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
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
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume