Benzene, 1,1'-[4-(3-phenylpropyl)-1,7-heptanediyl]bis-

Other names: 1,7-Diphenyl-4-(3-phenylpropyl)heptane
Inchi: InChI=1S/C28H34/c1-4-13-25(14-5-1)19-10-22-28(23-11-20-26-15-6-2-7-16-26)24-12-21
InchiKey: QQEZQKPPCWXFPH-UHFFFAOYSA-N
Formula: C28H34
SMILES: c1ccc(CCCC(CCCc2ccccc2)CCCc2ccccc2)cc1
Mol. weight [g/mol]: 370.57
CAS: 55282-64-9

Physical Properties

Property code	Value	Unit	Source
gf	519.67	kJ/mol	Joback Method
hf	83.06	kJ/mol	Joback Method
hfus	46.88	kJ/mol	Joback Method
hvap	84.36	kJ/mol	Joback Method
log10ws	-8.61		Crippen Method
logp	7.671		Crippen Method
mcvol	334.100	ml/mol	McGowan Method
pc	1184.97	kPa	Joback Method
tb	919.64	K	Joback Method
tc	1149.72	K	Joback Method
tf	469.58	K	Joback Method
vc	1.274	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	1166.23	J/mol×K	1149.72	Joback Method
cpg	1071.11	J/mol×K	919.64	Joback Method
cpg	1089.84	J/mol×K	957.99	Joback Method
cpg	1107.24	J/mol×K	996.33	Joback Method
cpg	1123.44	J/mol×K	1034.68	Joback Method
cpg	1138.59	J/mol×K	1073.03	Joback Method
cpg	1152.80	J/mol×K	1111.38	Joback Method
dvisc	0.0000326	Pa×s	919.64	Joback Method

dvisc	0.0008126	Pa×s	469.58	Joback Method
dvisc	0.0003288	Pa×s	544.59	Joback Method
dvisc	0.0001656	Pa×s	619.60	Joback Method
dvisc	0.0000967	Pa×s	694.61	Joback Method
dvisc	0.0000627	Pa×s	769.62	Joback Method
dvisc	0.0000440	Pa×s	844.63	Joback Method
hvapt	100.30	kJ/mol	523.50	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.84581e+01
Coeff. B	-8.79586e+03
Coeff. C	-7.30340e+01
Temperature range (K), min.	557.11
Temperature range (K), max.	742.09

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=C55282649&Units=SI

The Yaws Handbook of Vapor Pressure: https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure

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
hvapt:	Enthalpy of vaporization at a given temperature
log10ws:	Log10 of Water solubility in mol/l
logp:	Octanol/Water partition coefficient
mcvol:	McGowan's characteristic volume
pc:	Critical Pressure
pvap:	Vapor pressure
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume