

9-methyl-10-phenylphenanthrene

Inchi:	InChI=1S/C22H18/c1-2-17-18-12-6-7-13-19(18)20-14-8-9-15-21(20)22(17)16-10-4-3-5-1
InchiKey:	GHHKXSDQPWXKNG-UHFFFAOYSA-N
Formula:	C22H18
SMILES:	CCc1c(-c2ccccc2)c2ccccc2c2ccccc12
Mol. weight [g/mol]:	282.38

Physical Properties

Property code	Value	Unit	Source
gf	543.59	kJ/mol	Joback Method
hf	323.38	kJ/mol	Joback Method
hfus	33.69	kJ/mol	Joback Method
hvap	74.38	kJ/mol	Joback Method
log10ws	-8.49		Crippen Method
logp	6.222		Crippen Method
mvol	234.400	ml/mol	McGowan Method
pc	2023.58	kPa	Joback Method
rinpol	417.16		NIST Webbook
tb	809.02	K	Joback Method
tc	1067.51	K	Joback Method
tf	493.50	K	Joback Method
vc	0.895	m ³ /kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	661.09	J/molxK	809.02	Joback Method
cpg	677.60	J/molxK	852.10	Joback Method
cpg	692.95	J/molxK	895.18	Joback Method
cpg	707.32	J/molxK	938.27	Joback Method
cpg	720.91	J/molxK	981.35	Joback Method
cpg	733.89	J/molxK	1024.43	Joback Method
cpg	746.46	J/molxK	1067.51	Joback Method
dvisc	0.0011429	Paxs	493.50	Joback Method
dvisc	0.0008203	Paxs	546.09	Joback Method

dvisc	0.0006240	Paxs	598.67	Joback Method
dvisc	0.0004962	Paxs	651.26	Joback Method
dvisc	0.0004083	Paxs	703.85	Joback Method
dvisc	0.0003452	Paxs	756.43	Joback Method
dvisc	0.0002983	Paxs	809.02	Joback Method

Sources

McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=R15575&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci9903071
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
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
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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