

trans-1-Phenyl-1-pentene

Other names:	(1E)-1-Pentenylbenzene Benzene, 1-pentenyl-, trans
Inchi:	InChI=1S/C11H14/c1-2-3-5-8-11-9-6-4-7-10-11/h4-10H,2-3H2,1H3/b8-5+
InchiKey:	KHMYONNPZWOTKW-VMPITWQZSA-N
Formula:	C11H14
SMILES:	CCCC=Cc1ccccc1
Mol. weight [g/mol]:	146.23
CAS:	16002-93-0

Physical Properties

Property code	Value	Unit	Source
gf	234.37	kJ/mol	Joback Method
hf	83.38	kJ/mol	Joback Method
hfus	18.49	kJ/mol	Joback Method
hvap	42.31	kJ/mol	Joback Method
log10ws	-3.55		Crippen Method
logp	3.500		Crippen Method
mvol	137.790	ml/mol	McGowan Method
pc	2796.51	kPa	Joback Method
rinpol	1205.00		NIST Webbook
rinpol	1205.00		NIST Webbook
tb	481.92	K	Joback Method
tc	693.75	K	Joback Method
tf	235.07	K	Joback Method
vc	0.523	m ³ /kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	283.26	J/mol×K	481.92	Joback Method
cpg	298.98	J/mol×K	517.23	Joback Method
cpg	313.72	J/mol×K	552.53	Joback Method
cpg	327.54	J/mol×K	587.84	Joback Method
cpg	340.49	J/mol×K	623.14	Joback Method

cpg	352.62	J/molxK	658.45	Joback Method
cpg	363.97	J/molxK	693.75	Joback Method
dvisc	0.0035249	Paxs	235.07	Joback Method
dvisc	0.0014929	Paxs	276.21	Joback Method
dvisc	0.0007901	Paxs	317.35	Joback Method
dvisc	0.0004839	Paxs	358.50	Joback Method
dvisc	0.0003278	Paxs	399.64	Joback Method
dvisc	0.0002388	Paxs	440.78	Joback Method
dvisc	0.0001837	Paxs	481.92	Joback Method

Sources

McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C16002930&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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