Benzene, 4-ethenyl-1,2-dimethyl-

Other names:	1,2-Dimethyl-4-vinylbenzene
	3,4-Dimethylstyrene
	4-Vinyl-o-xylene
	Styrene, 3,4-dimethyl-
Inchi:	InChI=1S/C10H12/c1-4-10-6-5-8(2)9(3)7-10/h4-7H,1H2,2-3H3
InchiKey:	PMZXJPLGCUVUDN-UHFFFAOYSA-N
Formula:	C10H12
SMILES:	C=Cc1ccc(C)c(C)c1
Mol. weight [g/mol]:	132.20
CAS:	27831-13-6

Physical Properties

Property code	Value	Unit	Source
gf	214.31	kJ/mol	Joback Method
hf	89.29	kJ/mol	Joback Method
hfus	13.64	kJ/mol	Joback Method
hvap	40.78	kJ/mol	Joback Method
log10ws	-3.25		Crippen Method
logp	2.946		Crippen Method
mcvol	123.700	ml/mol	McGowan Method
pc	2969.80	kPa	Joback Method
rinpol	1099.90		NIST Webbook
rinpol	1100.00		NIST Webbook
rinpol	1099.90		NIST Webbook
tb	461.52	K	Joback Method
tc	673.43	K	Joback Method
tf	252.16	K	Joback Method
vc	0.469	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	241.30	J/mol×K	461.52	Joback Method
cpg	254.85	J/mol×K	496.84	Joback Method

cpg	267.67	J/mol×K	532.16	Joback Method
cpg	279.80	J/mol×K	567.47	Joback Method
cpg	291.26	J/mol×K	602.79	Joback Method
cpg	302.08	J/mol×K	638.11	Joback Method
cpg	312.28	J/mol×K	673.43	Joback Method
dvisc	0.0015433	Pa×s	252.16	Joback Method
dvisc	0.0009004	Pa×s	287.05	Joback Method
dvisc	0.0005904	Pa×s	321.95	Joback Method
dvisc	0.0004204	Pa×s	356.84	Joback Method
dvisc	0.0003181	Pa×s	391.73	Joback Method
dvisc	0.0002519	Pa×s	426.63	Joback Method
dvisc	0.0002066	Pa×s	461.52	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.45622e+01
Coeff. B	-3.89523e+03
Coeff. C	-7.05780e+01
Temperature range (K), min.	343.46
Temperature range (K), max.	491.65

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=C27831136&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
log10ws:	Log10 of Water solubility in mol/l
logp:	Octanol/Water partition coefficient
mcvol:	McGowan's characteristic volume
pc:	Critical Pressure
pvap:	Vapor pressure
rinpol:	Non-polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume