Benzene, 1-ethyl-3-propyl-

Other names:	1-Ethyl-3-n-propylbenzene
	1-Ethyl-3-propylbenzene
Inchi:	InChI=1S/C11H16/c1-3-6-11-8-5-7-10(4-2)9-11/h5,7-9H,3-4,6H2,1-2H3
InchiKey:	QCYGXOCMWHSXSU-UHFFFAOYSA-N
Formula:	C11H16
SMILES:	CCCc1cccc(CC)c1
Mol. weight [g/mol]:	148.24
CAS:	20024-91-3

Physical Properties

Property code	Value	Unit	Source
gf	144.52	kJ/mol	Joback Method
hf	-45.31	kJ/mol	Joback Method
hfus	17.90	kJ/mol	Joback Method
hvap	43.02	kJ/mol	Joback Method
log10ws	-3.50		Crippen Method
logp	3.202		Crippen Method
mcvol	142.090	ml/mol	McGowan Method
pc	2608.40	kPa	Joback Method
rinpol	1131.00		NIST Webbook
rinpol	1124.00		NIST Webbook
rinpol	1114.00		NIST Webbook
rinpol	1114.00		NIST Webbook
rinpol	1124.00		NIST Webbook
rinpol	1126.00		NIST Webbook
rinpol	1131.00		NIST Webbook
rinpol	1136.00		NIST Webbook
rinpol	1108.40		NIST Webbook
rinpol	1111.10		NIST Webbook
rinpol	1125.00		NIST Webbook
rinpol	1130.80		NIST Webbook
rinpol	1136.40		NIST Webbook
rinpol	1108.40		NIST Webbook
rinpol	1111.10		NIST Webbook
rinpol	1126.00		NIST Webbook
rinpol	1127.00		NIST Webbook
rinpol	1130.00		NIST Webbook

rinpol	1125.80		NIST Webbook
rinpol	1125.00		NIST Webbook
ripol	1343.40		NIST Webbook
ripol	1343.40		NIST Webbook
ripol	1343.00		NIST Webbook
ripol	1343.00		NIST Webbook
tb	467.00 ± 6.00	K	NIST Webbook
tc	685.93	K	Joback Method
tf	252.67	K	Joback Method
vc	0.543	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	300.77	J/mol×K	482.74	Joback Method
cpg	371.23	J/mol×K	652.06	Joback Method
cpg	358.64	J/mol×K	618.20	Joback Method
cpg	345.33	J/mol×K	584.33	Joback Method
cpg	331.27	J/mol×K	550.47	Joback Method
cpg	316.42	J/mol×K	516.60	Joback Method
cpg	383.12	J/mol×K	685.93	Joback Method
dvisc	0.0002096	Pa×s	482.74	Joback Method
dvisc	0.0002657	Pa×s	444.39	Joback Method
dvisc	0.0003524	Pa×s	406.05	Joback Method
dvisc	0.0004957	Pa×s	367.71	Joback Method
dvisc	0.0007549	Pa×s	329.36	Joback Method
dvisc	0.0012843	Pa×s	291.01	Joback Method
dvisc	0.0025675	Pa×s	252.67	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.44062e+01
Coeff. B	-3.93285e+03
Coeff. C	-7.23400e+01
Temperature range (K), min.	350.90

Temperature range (K), max.	504.77

Sources

McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C20024913&Units=SI
The Yaws Handbook of Vapor Pressure:	https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure
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

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
ripol:	Polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume