Benzene, (1-ethyldecyl)-

Other names:	Dodecane, 3-phenyl-
	3-Phenyldodecane
Inchi:	InChI=1S/C18H30/c1-3-5-6-7-8-9-11-14-17(4-2)18-15-12-10-13-16-18/h10,12-13,15-17H
InchiKey:	PGVOXXHNGYYHHB-UHFFFAOYSA-N
Formula:	C18H30
SMILES:	CCCCCCCCCC(CC)c1ccccc1
Mol. weight [g/mol]:	246.43
CAS:	2400-00-2

Physical Properties

Property code	Value	Unit	Source
gf	210.65	kJ/mol	Joback Method
hf	-183.60	kJ/mol	Joback Method
hfus	32.89	kJ/mol	Joback Method
hvap	57.55	kJ/mol	Joback Method
ie	9.00 ± 0.10	eV	NIST Webbook
log10ws	-6.42		Crippen Method
logp	6.321		Crippen Method
mcvol	240.720	ml/mol	McGowan Method
pc	1471.36	kPa	Joback Method
rinpol	1755.00		NIST Webbook
rinpol	298.60		NIST Webbook
rinpol	1758.00		NIST Webbook
rinpol	1767.00		NIST Webbook
rinpol	298.60		NIST Webbook
ripol	1972.00		NIST Webbook
ripol	1972.00		NIST Webbook
tb	637.48	K	Joback Method
tc	826.13	K	Joback Method
tf	304.04	K	Joback Method
vc	0.929	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	653.77	J/mol×K	637.48	Joback Method
cpg	673.88	J/mol×K	668.92	Joback Method
cpg	692.94	J/mol×K	700.36	Joback Method
cpg	710.99	J/mol×K	731.80	Joback Method
cpg	728.07	J/mol×K	763.24	Joback Method
cpg	744.23	J/mol×K	794.68	Joback Method
cpg	759.51	J/mol×K	826.13	Joback Method
dvisc	0.0040664	Pa×s	304.04	Joback Method
dvisc	0.0014152	Pa×s	359.61	Joback Method
dvisc	0.0006534	Pa×s	415.19	Joback Method
dvisc	0.0003620	Pa×s	470.76	Joback Method
dvisc	0.0002272	Pa×s	526.33	Joback Method
dvisc	0.0001559	Pa×s	581.91	Joback Method
dvisc	0.0001142	Pa×s	637.48	Joback Method

Sources

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C2400002&Units=SI
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

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
ie: Ionization energy
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

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