Decane, 3-methyl-

Other names:	2-Ethylnonane
	3-Methyldecane
Inchi:	InChI=1S/C11H24/c1-4-6-7-8-9-10-11(3)5-2/h11H,4-10H2,1-3H3
InchiKey:	JJRUZTXRDDMYGM-UHFFFAOYSA-N
Formula:	C11H24
SMILES:	CCCCCCCC(C)CC
Mol. weight [g/mol]:	156.31
CAS:	13151-34-3

Physical Properties

Property code	Value	Unit	Source
gf	39.30	kJ/mol	Joback Method
hf	-275.65	kJ/mol	Joback Method
hfus	20.72	kJ/mol	Joback Method
hvap	39.69	kJ/mol	Joback Method
log10ws	-4.19		Crippen Method
logp	4.393		Crippen Method
mcvol	165.850	ml/mol	McGowan Method
pc	1947.51	kPa	Joback Method
rinpol	1074.00		NIST Webbook
rinpol	1063.90		NIST Webbook
rinpol	1073.00		NIST Webbook
rinpol	1072.00		NIST Webbook
rinpol	1071.41		NIST Webbook
rinpol	1071.58		NIST Webbook
rinpol	1071.88		NIST Webbook
rinpol	1070.96		NIST Webbook
rinpol	1071.31		NIST Webbook
rinpol	1071.49		NIST Webbook
rinpol	1072.40		NIST Webbook
rinpol	1069.00		NIST Webbook
rinpol	1071.00		NIST Webbook
rinpol	1070.00		NIST Webbook
rinpol	1070.00		NIST Webbook
rinpol	1072.10		NIST Webbook
rinpol	1070.00		NIST Webbook
rinpol	1073.00		NIST Webbook

rinpol	1071.20		NIST Webbook
rinpol	1072.00		NIST Webbook
rinpol	1072.00		NIST Webbook
rinpol	1070.00		NIST Webbook
rinpol	1071.00		NIST Webbook
rinpol	1073.00		NIST Webbook
rinpol	1069.00		NIST Webbook
rinpol	1070.00		NIST Webbook
rinpol	1073.00		NIST Webbook
rinpol	1071.00		NIST Webbook
rinpol	1070.00		NIST Webbook
rinpol	1073.00		NIST Webbook
ripol	1070.00		NIST Webbook
ripol	1048.00		NIST Webbook
tb	450.64	K	Joback Method
tc	615.77	K	Joback Method
tf	198.73	K	Joback Method
vc	0.645	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	360.10	J/mol×K	450.64	Joback Method
cpg	376.48	J/mol×K	478.16	Joback Method
cpg	392.24	J/mol×K	505.68	Joback Method
cpg	407.41	J/mol×K	533.20	Joback Method
cpg	421.98	J/mol×K	560.73	Joback Method
cpg	435.99	J/mol×K	588.25	Joback Method
cpg	449.44	J/mol×K	615.77	Joback Method
dvisc	0.0105797	Pa×s	198.73	Joback Method
dvisc	0.0031400	Pa×s	240.72	Joback Method
dvisc	0.0013369	Pa×s	282.70	Joback Method
dvisc	0.0007098	Pa×s	324.69	Joback Method
dvisc	0.0004357	Pa×s	366.67	Joback Method
dvisc	0.0002956	Pa×s	408.65	Joback Method
dvisc	0.0002156	Pa×s	450.64	Joback Method
hvapt	46.50	kJ/mol	402.00	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.50345e+01
Coeff. B	-4.46160e+03
Coeff. C	-3.48170e+01
Temperature range (K), min.	337.36
Temperature range (K), max.	493.69

Sources

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=C13151343&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

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
hvapt:	Enthalpy of vaporization at a given temperature
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