

1-Decene, 2-methyl-

Other names:	2-Methyl-1-decene
Inchi:	InChI=1S/C11H22/c1-4-5-6-7-8-9-10-11(2)3/h2,4-10H2,1,3H3
InchiKey:	HLMACKQLXSEXIY-UHFFFAOYSA-N
Formula:	C11H22
SMILES:	C=C(C)CCCCCCC
Mol. weight [g/mol]:	154.29
CAS:	13151-27-4

Physical Properties

Property code	Value	Unit	Source
gf	121.03	kJ/mol	Joback Method
hf	-154.73	kJ/mol	Joback Method
hfus	21.66	kJ/mol	Joback Method
hvap	39.49	kJ/mol	Joback Method
log10ws	-4.28		Crippen Method
logp	4.313		Crippen Method
mcvol	161.550	ml/mol	McGowan Method
pc	2016.32	kPa	Joback Method
rinpol	1085.00		NIST Webbook
tb	447.64	K	Joback Method
tc	615.39	K	Joback Method
tf	198.01	K	Joback Method
vc	0.633	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	342.98	J/molxK	447.64	Joback Method
cpg	358.75	J/molxK	475.60	Joback Method
cpg	373.88	J/molxK	503.56	Joback Method
cpg	388.41	J/molxK	531.52	Joback Method
cpg	402.34	J/molxK	559.48	Joback Method
cpg	415.70	J/molxK	587.43	Joback Method
cpg	428.51	J/molxK	615.39	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
Coeff. A	1.46263e+01
Coeff. B	-3.90786e+03
Coeff. C	-7.03830e+01
Temperature range (K), min.	342.92
Temperature range (K), max.	489.91

Sources

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=C13151274&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/ci9903071

Legend

cpg:	Ideal gas heat capacity
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

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