

# 2-Decenal

<b>Other names:</b>	Dec-2-enal
<b>Inchi:</b>	InChI=1S/C10H18O/c1-2-3-4-5-6-7-8-9-10-11/h8-10H,2-7H2,1H3
<b>InchiKey:</b>	MMFCJPPRCYDLLZ-UHFFFAOYSA-N
<b>Formula:</b>	C10H18O
<b>SMILES:</b>	CCCCCCCC=CC=O
<b>Mol. weight [g/mol]:</b>	154.25
<b>CAS:</b>	3913-71-1

## Physical Properties

Property code	Value	Unit	Source
gf	14.02	kJ/mol	Joback Method
hf	-218.09	kJ/mol	Joback Method
hfus	24.15	kJ/mol	Joback Method
hvap	44.53	kJ/mol	Joback Method
log10ws	-3.14		Crippen Method
logp	3.102		Crippen Method
mcvol	149.030	ml/mol	McGowan Method
pc	2374.90	kPa	Joback Method
rinpol	1260.00		NIST Webbook
rinpol	1238.00		NIST Webbook
rinpol	1245.00		NIST Webbook
rinpol	1270.00		NIST Webbook
rinpol	1263.00		NIST Webbook
rinpol	1274.00		NIST Webbook
rinpol	1258.00		NIST Webbook
rinpol	1240.00		NIST Webbook
rinpol	1239.00		NIST Webbook
rinpol	1280.00		NIST Webbook
rinpol	1260.00		NIST Webbook
rinpol	1272.00		NIST Webbook
rinpol	1271.00		NIST Webbook
rinpol	1242.00		NIST Webbook
rinpol	1266.00		NIST Webbook
rinpol	1265.00		NIST Webbook
rinpol	1264.00		NIST Webbook
rinpol	1266.00		NIST Webbook
rinpol	1256.00		NIST Webbook

rinpol	1270.00		NIST Webbook
rinpol	1267.00		NIST Webbook
rinpol	1262.00		NIST Webbook
rinpol	1267.00		NIST Webbook
rinpol	1235.00		NIST Webbook
rinpol	1234.00		NIST Webbook
rinpol	1236.00		NIST Webbook
rinpol	1239.00		NIST Webbook
rinpol	1278.00		NIST Webbook
rinpol	1242.00		NIST Webbook
rinpol	1272.00		NIST Webbook
rinpol	1263.00		NIST Webbook
rinpol	1267.00		NIST Webbook
rinpol	1265.00		NIST Webbook
rinpol	1263.00		NIST Webbook
rinpol	1242.00		NIST Webbook
rinpol	1238.00		NIST Webbook
rinpol	1260.00		NIST Webbook
rinpol	1267.00		NIST Webbook
rinpol	1256.00		NIST Webbook
rinpol	1264.00		NIST Webbook
rinpol	1266.00		NIST Webbook
ripol	1655.00		NIST Webbook
ripol	1666.00		NIST Webbook
ripol	1645.00		NIST Webbook
ripol	1631.00		NIST Webbook
ripol	1630.00		NIST Webbook
ripol	1684.00		NIST Webbook
ripol	1659.00		NIST Webbook
ripol	1652.00		NIST Webbook
ripol	1658.00		NIST Webbook
ripol	1636.00		NIST Webbook
ripol	1639.00		NIST Webbook
ripol	1647.00		NIST Webbook
ripol	1631.00		NIST Webbook
tb	481.02	K	Joback Method
tc	657.18	K	Joback Method
tf	239.38	K	Joback Method
vc	0.593	m3/kmol	Joback Method

# Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	326.08	J/molxK	481.02	Joback Method
cpg	388.96	J/molxK	627.82	Joback Method
cpg	377.54	J/molxK	598.46	Joback Method
cpg	365.57	J/molxK	569.10	Joback Method
cpg	353.02	J/molxK	539.74	Joback Method
cpg	339.86	J/molxK	510.38	Joback Method
cpg	399.85	J/molxK	657.18	Joback Method
dvisc	0.0002437	Paxs	481.02	Joback Method
dvisc	0.0003193	Paxs	440.75	Joback Method
dvisc	0.0004415	Paxs	400.47	Joback Method
dvisc	0.0006565	Paxs	360.20	Joback Method
dvisc	0.0010787	Paxs	319.93	Joback Method
dvisc	0.0020448	Paxs	279.65	Joback Method
dvisc	0.0048073	Paxs	239.38	Joback Method

## Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
Coeff. A	1.51893e+01
Coeff. B	-4.44028e+03
Coeff. C	-8.07480e+01
Temperature range (K), min.	378.72
Temperature range (K), max.	530.27

## Sources

<b>Joback Method:</b>	<a href="https://en.wikipedia.org/wiki/Joback_method">https://en.wikipedia.org/wiki/Joback_method</a>
<b>McGowan Method:</b>	<a href="http://link.springer.com/article/10.1007/BF02311772">http://link.springer.com/article/10.1007/BF02311772</a>
<b>NIST Webbook:</b>	<a href="http://webbook.nist.gov/cgi/cbook.cgi?ID=C3913711&amp;Units=SI">http://webbook.nist.gov/cgi/cbook.cgi?ID=C3913711&amp;Units=SI</a>
<b>The Yaws Handbook of Vapor Pressure:</b>	<a href="https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure">https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure</a>
<b>Crippen Method:</b>	<a href="http://pubs.acs.org/doi/abs/10.1021/ci9903071">http://pubs.acs.org/doi/abs/10.1021/ci9903071</a>

## Legend

<b>cpg:</b>	Ideal gas heat capacity
<b>dvisc:</b>	Dynamic viscosity
<b>gf:</b>	Standard Gibbs free energy of formation
<b>hf:</b>	Enthalpy of formation at standard conditions
<b>hfus:</b>	Enthalpy of fusion at standard conditions
<b>hvap:</b>	Enthalpy of vaporization at standard conditions
<b>log10ws:</b>	Log10 of Water solubility in mol/l
<b>logp:</b>	Octanol/Water partition coefficient
<b>mcvol:</b>	McGowan's characteristic volume
<b>pc:</b>	Critical Pressure
<b>pvap:</b>	Vapor pressure
<b>rinpol:</b>	Non-polar retention indices
<b>ripol:</b>	Polar retention indices
<b>tb:</b>	Normal Boiling Point Temperature
<b>tc:</b>	Critical Temperature
<b>tf:</b>	Normal melting (fusion) point
<b>vc:</b>	Critical Volume

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