

# 2H-Pyran-2-carboxaldehyde, 3,4-dihydro-2,5-dimethyl-

Other names:

Methacrolein dimer  
Methacrylaldehyde dimer  
1,4-Pyran, 2,3-dihydro-2,5-dimethyl-2-formyl-  
2,3-Dihydro-2,5-dimethyl-2-formyl-1,4-pyran  
2,3-Dihydro-2,5-dimethyl-2H-pyran-2-carboxaldehyde  
2H-Pyran-2-carboxaldehyde, 3,4-dihydro-2,5-dimethylmethacrolein dimer  
3,4-dihydro-2,5-dimethyl-2H-pyran-2-carbaldehyde

InChI: InChI=1S/C8H12O2/c1-7-3-4-8(2,6-9)10-5-7/h5-6H,3-4H2,1-2H3

InChIKey: DYVJZCIYRQUXBA-UHFFFAOYSA-N

Formula: C8H12O2

SMILES: CC1=COCC(C)(C=O)CC1

Mol. weight [g/mol]: 140.18

CAS: 1920-21-4

## Physical Properties

Property code	Value	Unit	Source
gf	-129.87	kJ/mol	Joback Method
hf	-310.16	kJ/mol	Joback Method
hfus	13.11	kJ/mol	Joback Method
hvap	44.86	kJ/mol	Joback Method
log10ws	-1.89		Crippen Method
logp	1.658		Crippen Method
mcvol	115.860	ml/mol	McGowan Method
pc	3673.09	kPa	Joback Method
tb	481.98	K	Joback Method
tc	701.29	K	Joback Method
tf	209.00 ± 0.60	K	NIST Webbook
vc	0.439	m3/kmol	Joback Method

## Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	254.70	J/mol×K	481.98	Joback Method
cpg	268.57	J/mol×K	518.53	Joback Method

cpg	281.47	J/mol×K	555.08	Joback Method
cpg	293.50	J/mol×K	591.63	Joback Method
cpg	304.77	J/mol×K	628.19	Joback Method
cpg	315.38	J/mol×K	664.74	Joback Method
cpg	325.44	J/mol×K	701.29	Joback Method

## Sources

<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=C1920214&amp;Units=SI">http://webbook.nist.gov/cgi/cbook.cgi?ID=C1920214&amp;Units=SI</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>
<b>Crippen Method:</b>	<a href="https://www.chemeo.com/doc/models/crippen_log10ws">https://www.chemeo.com/doc/models/crippen_log10ws</a>
<b>Joback Method:</b>	<a href="https://en.wikipedia.org/wiki/Joback_method">https://en.wikipedia.org/wiki/Joback_method</a>

## Legend

<b>cpg:</b>	Ideal gas heat capacity
<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>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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