Pentanedial

Other names:	1,3-Diformylpropane
	1,5-Pentanedial
	1,5-Pentanedione
	Aldesan
	Alhydex
	Aqucar
	Cidex
	Cidex 7
	Coldcide-25 microbiocide
	Glutaclean
	Glutaral
	Glutaraldehyd
	Glutaralum
	Glutardialdehyde
	Glutarex 28
	Glutaric acid dialdehyde
	Glutaric aldehyde
	Glutaric dialdehyde
	Glutarol
	Gluteraldehyde
	Hospex
	NCI-C55425
	NSC 13392
	Novaruca
	Pentane-1,5-dial
	Pentanedial
	Potentiated acid glutaraldehyde
	Relugan GT
	Relugan GT 50
	Relugan GTW
	Sonacide
	Sporicidin
	Sterihyde
	Ucarcide
	Ucarcide 250
	Veruca-sep
	component of Cidex
Inchi:	InChI=1S/C5H8O2/c6-4-2-1-3-5-7/h4-5H,1-3H2
InchiKey:	SXRSQZLOMIGNAQ-UHFFFAOYSA-N
Formula:	C5H8O2

SMILES: O=CCCCC=O
Mol. weight [g/mol]: 100.12

Physical Properties

Property code	Value	Unit	Source
af	0.4686		Cheméo Relay (1.0)
gf	-207.82	kJ/mol	Joback Method
hf	-327.88	kJ/mol	Cheméo Relay (1.0)
hfus	13.28	kJ/mol	Joback Method
hvap	47.11	kJ/mol	Cheméo Relay (1.0)
ie	9.78	eV	Cheméo Relay (1.0)
log10ws	-0.02		Cheméo Relay (1.0)
logp	0.554		Crippen Method
mcvol	84.450	ml/mol	McGowan Method
pc	4162.33	kPa	Joback Method
tb	422.02	K	Cheméo Relay (1.0)
tc	625.09	K	Cheméo Relay (1.0)
tf	274.33	K	Cheméo Relay (1.0)
vc	0.311	m3/kmol	Cheméo Relay (1.0)

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	160.50	J/mol×K	411.12	Joback Method
cpg	201.50	J/mol×K	592.13	Joback Method
cpg	195.42	J/mol×K	561.96	Joback Method
cpg	189.04	J/mol×K	531.79	Joback Method
cpg	182.37	J/mol×K	501.63	Joback Method
cpg	175.40	J/mol×K	471.46	Joback Method
cpg	168.11	J/mol×K	441.29	Joback Method
dvisc	0.0009300	Pa×s	320.62	Joback Method
dvisc	0.0004175	Pa×s	411.12	Joback Method
dvisc	0.0005227	Pa×s	380.95	Joback Method
dvisc	0.0006801	Pa×s	350.78	Joback Method
dvisc	0.0038900	Pa×s	230.11	Joback Method
dvisc	0.0013571	Pa×s	290.45	Joback Method
dvisc	0.0021616	Pa×s	260.28	Joback Method

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C111308&Units=SI
Joback Method:	https://en.wikipedia.org/wiki/Joback_method
McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
Cheméo Relay (1.0):	
Cheméo Relay (1.0, beta):	

Legend

af:	Acentric Factor
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
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume