

MESITALDEHYDE

Other names:	Mesitaldehyde Mesitylaldehyde 2-Mesitylenecarboxaldehyde 2,4,6-Trimethylbenzaldehyde Mesitylenecarboxaldehyde
Inchi:	InChI=1S/C10H12O/c1-7-4-8(2)10(6-11)9(3)5-7/h4-6H,1-3H3
InchiKey:	HIKRJHFHKGZKRI-UHFFFAOYSA-N
Formula:	C10H12O
SMILES:	Cc1cc(C)c(C=O)c(C)c1
Mol. weight [g/mol]:	148.21

Physical Properties

Property code	Value	Unit	Source
af	0.4805		Cheméo Relay (1.0)
ea	0.44 ± 0.04	eV	NIST Webbook
gf	17.32	kJ/mol	Joback Method
hf	-137.52	kJ/mol	Cheméo Relay (1.0)
hfus	16.82	kJ/mol	Joback Method
hvap	60.25	kJ/mol	Cheméo Relay (1.0)
ie	8.72	eV	Cheméo Relay (1.0)
log10ws	-2.67		Cheméo Relay (1.0)
logp	2.424		Crippen Method
mcvol	129.570	ml/mol	McGowan Method
pc	3025.61	kPa	Joback Method
rinpol	1338.00		NIST Webbook
rinpol	1286.00		NIST Webbook
rinpol	1342.00		NIST Webbook
rinpol	1335.00		NIST Webbook
rinpol	1339.00		NIST Webbook
rinpol	1347.00		NIST Webbook
rinpol	1335.00		NIST Webbook
rinpol	1323.00		NIST Webbook
rinpol	1342.00		NIST Webbook
rinpol	1329.00		NIST Webbook
rinpol	1338.00		NIST Webbook
rinpol	1323.00		NIST Webbook
ripol	1929.00		NIST Webbook

ripol	1929.00		NIST Webbook
tb	510.20	K	NIST Webbook
tb	511.70	K	NIST Webbook
tc	748.25	K	Cheméo Relay (1.0)
tf	309.80	K	Cheméo Relay (1.0)
vc	0.471	m3/kmol	Cheméo Relay (1.0)

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	277.66	J/mol×K	518.48	Joback Method
cpg	290.15	J/mol×K	553.99	Joback Method
cpg	302.00	J/mol×K	589.50	Joback Method
cpg	313.24	J/mol×K	625.00	Joback Method
cpg	323.88	J/mol×K	660.51	Joback Method
cpg	333.94	J/mol×K	696.02	Joback Method
cpg	343.43	J/mol×K	731.53	Joback Method
dvisc	0.0014505	Pa×s	308.44	Joback Method
dvisc	0.0009364	Pa×s	343.45	Joback Method
dvisc	0.0006555	Pa×s	378.45	Joback Method
dvisc	0.0004874	Pa×s	413.46	Joback Method
dvisc	0.0003796	Pa×s	448.47	Joback Method
dvisc	0.0003065	Pa×s	483.47	Joback Method
dvisc	0.0002548	Pa×s	518.48	Joback Method

Sources

Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
Cheméo Relay (1.0):	
Cheméo Relay (1.0, beta):	
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C487683&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

Legend

af:	Acentric Factor
cpg:	Ideal gas heat capacity
dvisc:	Dynamic viscosity
ea:	Electron affinity
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
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

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