

1-Naphthalenecarboxaldehyde, 4-methyl-

Inchi:	InChI=1S/C12H10O/c1-9-6-7-10(8-13)12-5-3-2-4-11(9)12/h2-8H,1H3
InchiKey:	LANRGTXVAPBSIA-UHFFFAOYSA-N
Formula:	C12H10O
SMILES:	Cc1ccc(C=O)c2ccccc12
Mol. weight [g/mol]:	170.21
CAS:	33738-48-6

Physical Properties

Property code	Value	Unit	Source
gf	150.44	kJ/mol	Joback Method
hf	28.07	kJ/mol	Joback Method
hfus	19.41	kJ/mol	Joback Method
hvap	54.27	kJ/mol	Joback Method
log10ws	-3.99		Crippen Method
logp	2.961		Crippen Method
mcvol	138.290	ml/mol	McGowan Method
pc	3265.31	kPa	Joback Method
tb	578.24	K	Joback Method
tc	812.40	K	Joback Method
tf	351.16	K	Joback Method
vc	0.538	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	313.45	J/mol×K	578.24	Joback Method
cpg	326.42	J/mol×K	617.27	Joback Method
cpg	338.45	J/mol×K	656.29	Joback Method
cpg	349.59	J/mol×K	695.32	Joback Method
cpg	359.93	J/mol×K	734.35	Joback Method
cpg	369.51	J/mol×K	773.38	Joback Method
cpg	378.41	J/mol×K	812.40	Joback Method
dvisc	0.0015729	Pa×s	351.16	Joback Method
dvisc	0.0011075	Pa×s	389.01	Joback Method

dvisc	0.0008298	Pa×s	426.85	Joback Method
dvisc	0.0006517	Pa×s	464.70	Joback Method
dvisc	0.0005308	Pa×s	502.55	Joback Method
dvisc	0.0004449	Pa×s	540.39	Joback Method
dvisc	0.0003817	Pa×s	578.24	Joback Method

Pressure Dependent Properties

Property code	Value	Unit	Pressure [kPa]	Source
tbrp	448.20	K	1.70	NIST Webbook

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C33738486&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
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

Legend

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
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
tbrp:	Boiling point at reduced pressure
tc:	Critical Temperature
tf:	Normal melting (fusion) point

vc: Critical Volume

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