

3-Methylbenzoylhydrazide

Other names:	3-Toluic hydrazide m-Toluic hydrazide m-Toluic acid hydrazide Benzoic acid, 3-methyl-, hydrazide m-toluohydrazide
Inchi:	InChI=1S/C8H10N2O/c1-6-3-2-4-7(5-6)8(11)10-9/h2-5H,9H2,1H3,(H,10,11)
InchiKey:	XFNNAMBYJSQXKF-UHFFFAOYSA-N
Formula:	C8H10N2O
SMILES:	Cc1cccc(C(=O)NN)c1
Mol. weight [g/mol]:	150.18
CAS:	13050-47-0

Physical Properties

Property code	Value	Unit	Source
gf	146.18	kJ/mol	Joback Method
hf	-8.71	kJ/mol	Joback Method
hfus	22.02	kJ/mol	Joback Method
hvap	60.16	kJ/mol	Joback Method
log10ws	-2.30		Crippen Method
logp	0.599		Crippen Method
mcvol	121.350	ml/mol	McGowan Method
pc	4233.04	kPa	Joback Method
tb	590.67	K	Joback Method
tc	823.28	K	Joback Method
tf	404.71	K	Joback Method
vc	0.446	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	286.50	J/mol×K	590.67	Joback Method
cpg	297.98	J/mol×K	629.44	Joback Method
cpg	308.67	J/mol×K	668.21	Joback Method
cpg	318.60	J/mol×K	706.98	Joback Method

cpg	327.79	J/mol×K	745.75	Joback Method
cpg	336.28	J/mol×K	784.52	Joback Method
cpg	344.12	J/mol×K	823.28	Joback Method

Sources

McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C13050470&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.cheméo.com/doc/models/crippen_log10ws
Joback Method:	https://en.wikipedia.org/wiki/Joback_method

Legend

cpg:	Ideal gas heat capacity
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
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

Latest version available from:

<https://www.cheméo.com/cid/54-532-1/3-Methylbenzoylhydrazide.pdf>

Generated by Cheméo on 2025-12-05 13:35:13.302753746 +0000 UTC m=+4689910.832794404.

Cheméo (<https://www.cheméo.com>) is the biggest free database of chemical and physical data for the process industry.