Benzenamine, 4-methyl-2-nitro-

Other names:

(4-Methyl-2-nitrophenyl)amine
1-Amino-2-nitro-4-methylbenzene
2-Nitro-4-methylaniline
2-Nitro-p-toluidine
3-Nitro-4-aminotoluene
3-Nitro-4-toluidine
4-Amino-3-nitrotoluene
4-Methyl-2-nitroaniline
4-Methyl-2-nitrobenzenamine
4-Methyl-6-nitroaniline
Amarthol Fast Red GL Base
Amarthol Fast Red GL Salt
Azoamine Red A
Azobase NAT
Azoene Fast Red Red GL Salt
Azofix Red GL Salt
Azoic Diazo Component 8
Azoic diazo component 8, base
C.I. 37110
C.I. Azoic Diazo Component 8
Devol Red G
Devol Red Salt G
Diazo Fast Red GL
Fast Red 3NT Base
Fast Red 3NT Salt
Fast Red Base GL
Fast Red Base JL
Fast Red G Base
Fast Red GL
Fast Red GL Base
Fast Red MGL Base
HD Fast Red GL Base
Hiltonil Fast Red GL Base
Hiltosal Fast Red GL Salt
Lake Red G Base
Lithosol Scarlet Base M
Lithosol Scarlet Base MB
Lithosol Scarlet Base MBW
Lithosol Scarlet Base MW
MNPT

Mitsui Red GL Base
Naphthanil Red G Base
Naphtoelan Fast Red GL Base
Red Base Ciba VII
Red Base Irga VII
Red Base NGL
Red G Base
Red G Salt
Red Salt Ciba VII
Red Salt Irga VII
Sanyo Fast Red GL Base
Shinnippon Fast Red GL Base
Toyo Fast Red GL Base
Tulabase Fast Red GL
aniline, 4-methyl-2-nitro-
p-Toluidine, 2-nitro-

Inchi: InChI=1S/C7H8N2O2/c1-5-2-3-6(8)7(4-5)9(10)11/h2-4H,8H2,1H3
InchiKey: DLURHXYXQYMPLT-UHFFFAOYSA-N
Formula: C7H8N2O2
SMILES: Cc1ccc(N)c([N+](=O)[O-])c1
Mol. weight [g/mol]: 152.15
CAS: 89-62-3

Physical Properties

Property code	Value	Unit	Source
gf	203.21	kJ/mol	Joback Method
hf	48.81	kJ/mol	Joback Method
hfus	23.71	kJ/mol	Joback Method
hvap	62.01	kJ/mol	Joback Method
log10ws	-2.23		Crippen Method
logp	1.485		Crippen Method
mcvol	113.130	ml/mol	McGowan Method
pc	4328.25	kPa	Joback Method
tb	620.57	K	Joback Method
tc	879.01	K	Joback Method
tf	388.56	K	Solubility of 4-methyl-2-nitroaniline in fourteen organic solvents from T = (278.15 to 313.15) K and mixing properties of solutions

vc	0.430	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	269.53	J/mol×K	620.57	Joback Method
cpg	280.15	J/mol×K	663.64	Joback Method
cpg	289.96	J/mol×K	706.72	Joback Method
cpg	299.00	J/mol×K	749.79	Joback Method
cpg	307.29	J/mol×K	792.87	Joback Method
cpg	314.89	J/mol×K	835.94	Joback Method
cpg	321.82	J/mol×K	879.01	Joback Method
cps	205.40	J/mol×K	323.00	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.25107e+01
Coeff. B	-3.79209e+03
Coeff. C	-8.72810e+01
Temperature range (K), min.	397.52
Temperature range (K), max.	614.02

Sources

Crippen Method: http://pubs.acs.org/doi/abs/10.1021/ci990307l

Crippen Method: https://www.chemeo.com/doc/models/crippen_log10ws

Solubility of 4-methyl-2-nitroaniline in fourteen organic solvents from T = (278.15 to 319.15) K and mixing properties of solutions: https://www.doi.org/10.1016/j.jct.2017.02.008

Joback Method: https://en.wikipedia.org/wiki/Joback_method

McGowan Method: http://link.springer.com/article/10.1007/BF02311772

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C89623&Units=SI

The Yaws Handbook of Vapor Pressure: https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure

Legend

cpg:	Ideal gas heat capacity
cps:	Solid phase 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
pvap:	Vapor pressure
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

Latest version available from:
https://www.chemeo.com/cid/41-677-5/Benzenamine-4-methyl-2-nitro.pdf
Generated by Cheméo on 2025-12-23 18:10:36.097457704 +0000 UTC m=+6261633.627498369.
Cheméo (https://www.chemeo.com) is the biggest free database of chemical and physical data for the process industry.