Hydrazine, 1,1-diphenyl-2-(2,4,6-trinitrophenyl)-

Other names: Hydrazine, 1,1-diphenyl-2-picryl-
«alpha»,«alpha»-Diphenyl-«beta»-picryl hydrazide
«alpha»,«alpha»-Diphenyl-«beta»-picrylhydrazine
Diphenylpicrylhydrazine
Hydrazine, diphenylpicryl-
1,1-Diphenyl-2-picrylhydrazine
2,2-Diphenyl-1-picrylhydrazine
N,N-Diphenyl-N'-(2,4,6-trinitrophenyl)hydrazine
1,1-Diphenyl-2-(2,4,6-trinitrophenyl)hydrazine
2,2-Diphenyl-1-(2,4,6-trinitrophenyl)hydrazine
NSC 12563
N,N-diphenyl-N'-picrylhydrazine

Inchi: InChI=1S/C18H13N5O6/c24-21(25)15-11-16(22(26)27)18(17(12-15)23(28)29)19-20(13-7

InchiKey: WCBPJVKVIMMEQC-UHFFFAOYSA-N

Formula: C18H13N5O6

SMILES: O=[N+]([O-])c1cc([N+](=O)[O-])c(NN(c2ccccc2)c2ccccc2)c([N+](=O)[O-])c1

Mol. weight [g/mol]: 395.33

CAS: 1707-75-1

Physical Properties

Property code	Value	Unit	Source
gf	715.84	kJ/mol	Joback Method
hf	349.05	kJ/mol	Joback Method
hfus	65.54	kJ/mol	Joback Method
hvap	122.73	kJ/mol	Joback Method
ie	7.30	eV	NIST Webbook
log10ws	-6.94		Crippen Method
logp	4.576		Crippen Method
mcvol	265.420	ml/mol	McGowan Method
pc	2627.15	kPa	Joback Method
tb	1224.35	K	Joback Method
tc	1526.21	K	Joback Method
tf	925.40	K	Joback Method
vc	1.018	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	839.76	J/mol×K	1224.35	Joback Method
cpg	847.27	J/mol×K	1274.66	Joback Method
cpg	854.53	J/mol×K	1324.97	Joback Method
cpg	861.76	J/mol×K	1375.28	Joback Method
cpg	869.22	J/mol×K	1425.59	Joback Method
cpg	877.13	J/mol×K	1475.90	Joback Method
cpg	885.75	J/mol×K	1526.21	Joback Method

Sources

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C1707751&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
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