Terephthalic dihydrazide

Other names: 1,4-Benzenedicarboxylic acid, dihydrazide; Terephthalic acid bishydrazide; Terephthalic acid dihydrazide; Terephthalic acid hydrazide; Terephthalic hydrazide; Terephthalohydrazide; Terephthaloyl dihydrazide.

InChI: InChI=1S/C8H10N4O2/c9-11-7(13)5-1-2-6(4-3-5)8(14)12-10/h1-4H,9-10H2,(H,11,13)(H,12,14)

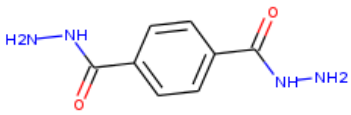
InChI Key: ALHNLFMSAXZKRC-UHFFFAOYSA-N

Formula: C8H10N4O2

SMILES: NNC(=O)c1ccc(C(=O)NN)cc1

Molecular Weight: 194.19

CAS: 136-64-1



Physical Properties

Property	Value	Unit	Source
$\Delta_f G°$	173.10	kJ/mol	Joback Method
$\Delta_f H°_{gas}$	-34.03	kJ/mol	Joback Method
$\Delta_{fus} H°$	33.92	kJ/mol	Joback Method
$\Delta_{vap} H°$	83.99	kJ/mol	Joback Method
$log P_{oct/wat}$	-1.106		Crippen Method
P_c	5073.01	kPa	Joback Method
T_{boil}	767.24	K	Joback Method
T_c	1009.00	K	Joback Method
T_{fus}	590.56	K	Joback Method
V_c	0.515	m^3/kg-mol	Joback Method

Temperature Dependent Properties

Property	Value	Unit	Temperature (K)	Source
$C_{p,gas}$	392.16	J/mol×K	767.24	Joback Method

Sources

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

NIST Webbook: http://webbook.nist.gov/cgi/inchi/InChI=1S/C8H10N4O2/c9-11-7(13)5-1-2-6(4-3-5)8(14)12-10/h1-4H,9-10H2,(H,11,13)(H,12,14)

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

Legend

$\mathbf{C_{p,gas}}$: Ideal gas heat capacity (J/mol×K).
$\Delta_f\mathbf{G°}$: Standard Gibbs free energy of formation (kJ/mol).
$\Delta_f\mathbf{H°_{gas}}$: Enthalpy of formation at standard conditions (kJ/mol).
$\Delta_{fus}\mathbf{H°}$: Enthalpy of fusion at standard conditions (kJ/mol).
$\Delta_{vap}\mathbf{H°}$: Enthalpy of vaporization at standard conditions (kJ/mol).
$\boldsymbol{log}\mathbf{P_{oct/wat}}$: Octanol/Water partition coefficient .
$\mathbf{P_c}$: Critical Pressure (kPa).
$\mathbf{T_{boil}}$: Normal Boiling Point Temperature (K).
$\mathbf{T_c}$: Critical Temperature (K).
$\mathbf{T_{fus}}$: Normal melting (fusion) point (K).
$\mathbf{V_c}$: Critical Volume (m^3/kg-mol).

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