

Heptane, 1-nitro-

Other names: 1-Nitroheptane.

InChI: InChI=1S/C7H15NO2/c1-2-3-4-5-6-7-8(9)10/h2-7H2,1H3

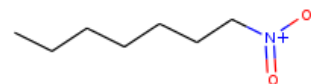
InChI Key: UZONFOPDCXAZND-UHFFFAOYSA-N

Formula: C7H15NO2

SMILES: CCCCCC[N+](=O)[O-]

Molecular Weight: 145.20

CAS: 693-39-0



Physical Properties

Property	Value	Unit	Source
$\Delta_f G^\circ$	43.61	kJ/mol	Joback Method
$\Delta_f H^\circ_{\text{gas}}$	-198.57	kJ/mol	Joback Method
$\Delta_{\text{fus}} H^\circ$	25.25	kJ/mol	Joback Method
$\Delta_{\text{vap}} H^\circ$	47.77	kJ/mol	Joback Method
$\log P_{\text{oct/wat}}$	2.234		Crippen Method
P_c	2835.36	kPa	Joback Method
T_{boil}	511.40	K	Joback Method
T_c	710.38	K	Joback Method
T_{fus}	312.26	K	Joback Method
V_c	0.509	m ³ /kg-mol	Joback Method

Temperature Dependent Properties

Property	Value	Unit	Temperature (K)	Source
$C_{p,\text{gas}}$	293.28	J/mol×K	511.4	Joback Method

Sources

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

NIST Webbook:

[http://webbook.nist.gov/cgi/inchi/InChI=1S/C7H15NO2/c1-2-3-4-5-6-7-8\(9\)10/h2-7H2,1H3](http://webbook.nist.gov/cgi/inchi/InChI=1S/C7H15NO2/c1-2-3-4-5-6-7-8(9)10/h2-7H2,1H3)

Crippen Method: <http://pubs.acs.org/doi/abs/10.1021/ci9903071>

Legend

$C_{p, gas}$: Ideal gas heat capacity (J/mol×K).

$\Delta_f G^\circ$: Standard Gibbs free energy of formation (kJ/mol).

$\Delta_f H^\circ_{gas}$: Enthalpy of formation at standard conditions (kJ/mol).

$\Delta_{fus} H^\circ$: Enthalpy of fusion at standard conditions (kJ/mol).

$\Delta_{vap} H^\circ$: Enthalpy of vaporization at standard conditions (kJ/mol).

$\log P_{oct/wat}$: Octanol/Water partition coefficient .

P_c : Critical Pressure (kPa).

T_{boil} : Normal Boiling Point Temperature (K).

T_c : Critical Temperature (K).

T_{fus} : Normal melting (fusion) point (K).

V_c : Critical Volume (m³/kg-mol).

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