>>**Entry Name: 1-Hydroxy-2-phenyldiazene 2-oxide**
Synonym(s): *N*-Hydroxy-*N*-nitrosobenzenamine, 9CI. *N*-Nitroso-*N*-phenylhydroxylamine, 8CI. *N*-Hydroxy-*N*-nitrosoaniline

CAS Registry Number: 148-97-0
Related CAS Registry Numbers(s): 31773-90-7
$PhN^{(+)}(O^{(-)})=NOH(Z\text{-})$ << >> PhN(OH)NO

Molecular Formula: $C_6H_6N_2O_2$
Molecular Weight: 138.126
Accurate Mass: 138.042928
Percentage Composition: C 52.17%; H 4.38%; N 20.28%; O 23.17%

Physical Description: Cryst. (Me_2CO)
Other Data: V. unstable in air and org. solvs.

>>**Derivative:** NH_4 salt
Synonym(s): Cupferron

CAS Registry Number: 135-20-6

Molecular Formula: $C_6H_9N_3O_2$
Molecular Weight: 155.156
Accurate Mass: 155.069477
Percentage Composition: C 46.45%; H 5.85%; N 27.08%; O 20.62%
Use/Importance: Used in precipitation and extraction separation of Al, Bi, Co, Zn, Cu, Fe, Ga, In, Mn, Sb, Th, Ti, U, W, Zr; gravimetric detn. of Al, Bi, Cu, Fe(*III*), Nb, Ti, Zr; photometric detn. of Fe(*III*), Ti, V. Polymerisation inhibitor for process stabilisation, storage stabiliser for monomers (other salts also used)
Physical Description: Needles (H_2O)
Melting Point: Mp 163-164°
Solubility: Sol. H_2O, EtOH; insol. Et_2O
Other Data: Dec. on heating to NH_3 and NO_x
Hazard & Toxicity: Unstable in presence of Th(*IV*), with risk of explosion above 15°. Severe eye irritant. Exp. carcinogen (large dose)

Aldrich: 20688-1
Fluka: 61220
Rare Chemicals Library: S60138-1
Sigma: C5638
Other: Wako chemical

>>**Derivative:** 4-Methylbenzenesulfonyl

CAS Registry Number: 16046-28-9
Molecular Formula: $C_{13}H_{12}N_2O_4S$
Molecular Weight: 292.315
Percentage Composition: C 53.42%; H 4.14%; N 9.58%; O 21.89%; S 10.97%
Physical Description: Plates (EtOAc), cryst. ($CHCl_3$/hexane)
Melting Point: Mp 136-137 dec.°

>>**Derivative:** Me ether
Synonym(s): 1-Methoxy-2-phenyldiazene 2-oxide, 9CI. 1-Methoxy-2-phenyldiimine 2-oxide, 8CI

CAS Registry Number: 25370-94-9
Molecular Formula: $C_7H_8N_2O_2$
Molecular Weight: 152.152
Accurate Mass: 152.058578
Percentage Composition: C 55.26%; H 5.30%; N 18.41%; O 21.03%
Physical Description: Prisms (petrol)
Melting Point: Mp 37-38°