



>>Entry Name: Nitryl chloride ((NO₂)Cl), 11Cl

Synonym(s): Chlorine(*I*) nitrite

CAS Registry Number: 13444-90-1

ClNO₂ (C_{2v})

Molecular Formula: ClNO₂

Molecular Weight: 81.458

Accurate Mass: 80.961756

Percentage Composition: Cl 43.52%; N 17.19%; O 39.28%

Source/Synthesis: Synth. from HNO₃ + ClSO₃H

Physical Description: Colourless gas; darkens on keeping even at –80°

Melting Point: Mp –145°

Boiling Point: Bp –15°

Density: d⁰ 1.37

Other Data: Dec. above 120°. Hydrol. by H₂O to HCl + HNO₃

Hazard & Toxicity: Corrosive, toxic

References:

Inorg. Synth., 1953, **4**, 52, (*synth*)

Millen, D.J. *et al.*, *J.C.S.*, 1958, 350, (*struct*)

Gmelin Handbook Inorg. Chem., Syst. No. 6, 1969, **B2**, 521, (*bibl*)

Brauer, G., *Handbuch Prap. Anorg. Chem.*, 3rd edn., Ferdinand Enke Verlag, 1975, **1**, 476, (*synth*)

Durig, J.R. *et al.*, *Spectrochim. Acta A*, 1994, **50**, 463, (*ir, Raman*)

Obermeyer, A. *et al.*, *J.A.C.S.*, 1995, **117**, 7887, (*cryst struct*)

Lewis, R.J., *Sax's Dangerous Properties of Industrial Materials*, 8th edn., Van Nostrand Reinhold, 1992, NMT000