



>>Entry Name: Hexanitroethane, 9Cl, 8Cl

CAS Registry Number: 918-37-6

$(\text{O}_2\text{N})_3\text{CC}(\text{NO}_2)_3$

Molecular Formula: $\text{C}_2\text{N}_6\text{O}_{12}$

Molecular Weight: 300.055

Accurate Mass: 299.957424

Percentage Composition: C 8.01%; N 28.01%; O 63.99%

Source/Synthesis: Formed by nitrating the K salt of trinitropropionaldehyde

Use/Importance: High energy fuel oxidizer for rockets

Physical Description: Solid

Melting Point: Mp 150 dec.°

Solubility: Sol. CCl_4 , CH_2Cl_2

Hazard & Toxicity: Heat sensitive explosive. Reacts explosively with B. Exothermic reaction with 1,1-Dimethylhydrazine [CZW43-H](#) and other organic bases. Reacts explosively with hydrogen-containing organic compounds

References:

Wills, W., *Ber.*, 1914, **47**, 961, (*synth*)

Allsop, F. *et al.*, *J.C.S.*, 1923, **123**, 2305, (*synth*)

Noble, P. *et al.*, *CA*, 1963, **58**, 13701a, (*props*)

U.S. Pat., 1963, 3 101 379; *CA*, **60**, 1588c, (*synth*)

Loewenschuss, A. *et al.*, *Spectrochim. Acta A*, 1974, **30**, 371, (*synth, ir, Raman, ms*)

Bretherick, L., *Handbook of Reactive Chemical Hazards*, 4th edn., Butterworths, 1990, 0957