



>>Entry Name: Potassium metaphosphate, 9Cl, 8Cl

ENTRY UNDER REVIEW

CAS Registry Number: 7790-53-6

(KPO₃)_x

Molecular Formula: KO₃P

Molecular Weight: 118.07

Accurate Mass: 117.922214

Percentage Composition: K 33.11%; O 40.65%; P 26.23%

Source/Synthesis: Synth. from O₂ bubbled through KCl + POCl₃ at 800-1000°

Melting Point: Mp 803-813°

>>Variant: Monomeric-form

Molecular Formula: KO₃P

Molecular Weight: 118.07

Accurate Mass: 117.922214

Percentage Composition: K 33.11%; O 40.65%; P 26.23%

Source/Synthesis: Synth. by vaporisation of K₃PO₄ or K₄P₂O₇ at 1000-1400° and isol. in nitrogen or argon matrix

>>Variant: Polymeric-form

CAS Registry Number: 29057-10-1

Molecular Formula: KO₃P

Molecular Weight: 118.07

Accurate Mass: 117.922214

Source/Synthesis: Synth. from KH₂PO₄ at >200°, or KCl + H₃PO₄ at 500°

Other Data: Undergoes polymorphic transitions at *ca.* 500°, 670° and various forms may resemble the Na Maddrell and Kurrol salts, the latter form being the most characteristic for K salt

References:

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Jost, K.H. *et al.*, *Acta Cryst. B*, 1971, **27**, 1345, (*struct*)

Vorob'ev, N.I. *et al.*, *CA*, 1972, **77**, 150961, (*manuf*)

Exarhos, G.J. *et al.*, *J. Chem. Phys.*, 1974, **60**, 4145, (*ir, Raman*)

Rat'kovskii, I.A. *et al.*, *Zh. Fiz. Khim.*, 1974, **48**, 230; *Russ. J. Phys. Chem. (Engl. Transl.)*, 1974, **48**, 140, (*ms*)

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Bowling, R.A. *et al.*, *J. Electron Spectrosc. Relat. Phenom.*, 1979, **17**, 25, (*pe*)

Grimmer, A.R. *et al.*, *Chem. Phys. Lett.*, 1983, **99**, 487, (*P-31 nmr*)

Bencivenni, L. *et al.*, *J. Mol. Struct.*, 1983, **98**, 195, (*synth, ir*)

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Girichov, G.V. *et al.*, *Zh. Strukt. Khim.*, 1987, **28**, 189; *J. Struct. Chem. (Engl. Transl.)*, 1987, **28**, 630, (*ed, struct*)

Chudinova, N.N. *et al.*, *Izv. Akad. Nauk SSSR, Neorg. Mater.*, 1989, **25**, 459; *Inorg. Mater. (Engl. Transl.)*, 1989, **25**, 399, (*synth*)

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