



>>Entry Name: Indium phosphide (InP)

CAS Registry Number: 22398-80-7

Extra CAS Registry Numbers(s): 1312-40-9

InP

Molecular Formula: InP

Molecular Weight: 145.794

Accurate Mass: 145.877642

Percentage Composition: In 78.76%; P 21.24%

Source/Synthesis: Synth. from elements or from $\text{Zn}_3\text{P}_2 + \text{In}$ at 800° . High qual. InP layer produced on Si using combined organometallic vapour phase epitaxy and vapour mixing epitaxy

Use/Importance: Semiconductor for solar energy conversion

Physical Description: Grey cryst. (by subl.). Not oxidised in air $<250^\circ$. Not attacked by H_2O or NaOH . Gives PH_3 with dil. acids

Melting Point: Mp 1054°

Other Data: Dielectric const. ϵ 9.6. E_g 1.30 eV

Aldrich: 36687-0

References:

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Hilsum, C. *et al.*, *Semiconduc. III-V Compds.*, Pergamon, Oxford, 1961, (*props*)
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Willardson, R.K. *et al.*, *Semicond. Semimet.*, Academic Press, 1966, **1**; **2**; 1967, **3**; 1968, **4**, (*rev*)
Mooradian, A. *et al.*, *Solid State Commun.*, 1966, **4**, 431, (*Raman*)
Van Vechten, J.A. *et al.*, *Phys. Rev.*, 1969, **182**, 891, (*cryst struct*)
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