

substance: FeP₄

property: physical properties

monoclinic ambient-pressure modification:

energy gap and activation energy

E_A	0.0014 eV	$T = 4...70$ K	from $\log \rho \propto E_A/kT$	80G
E_g	0.32 eV	near $T = 300$ K	given as $E_A = 0.16$ eV, from $\log \rho \propto E_A/kT$	80G

magnetic susceptibility

χ_m	$-1.14 \cdot 10^{-6}$ $\text{cm}^3 \text{mol}^{-1}$	RT	χ in CGS-emu	80G
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black and lustrous crystals of acicular habit [80G].

orthorhombic high-pressure modification:

activation energy

E_A	0.052 eV		from $\log \rho \propto E_A/kT$, $T = 77...300$ K	78S
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resistivity

ρ	$3 \cdot 10^4 \Omega \text{cm}$	RT		78S
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weak magnetization 77...300 K (second phase?) [78S].

For structure, chemical bond and comparative tables of crystallographic properties of transition metal tetraphosphides, see documents , , .

References:

- 78S Sugitani, M., Kimomura, N., Koizumi, M., Kume, S.: J. Solid State Chem. 26 (1978) 195.
80G Grandjean, F., Gerard, A., Krieger, U., Heiden, C., Braun, D. J., Jeitschko, W.: Solid State Commun. 33 (1980) 261.