

No. 45A-12 CH₃NH₃Al(SeO₄)₂ · 12H₂O, Methylammonium aluminum selenate dodecahydrate
(*M* = 561.14)

1a	Ferroelectric activity in $\text{CH}_3\text{NH}_3\text{Al}(\text{SeO}_4)_2 \cdot 12\text{H}_2\text{O}$ was discovered by Pepinsky et al. in 1957.			57Pep
b	phase	II	I	57Pep
	state	F	P	
	crystal system		cubic	
	$\theta [^\circ\text{C}]$	−57		
	$\rho = 1.820 \cdot 10^3 \text{ kg m}^{-3}$ at RT. Transparent.			57Pep
2a	Crystal growth: evaporation or cooling method from aqueous solution.			57Pep
3a	Unit cell parameter: $a = 12.698 \text{ \AA}$ at 22°C .			57Pep
5a	$\kappa_0 - \kappa_\infty = C/(T - \theta_p)$, $T > \theta$, $C = 185 \text{ K}$, $\kappa_\infty = 8.0$, $\theta_p = 214.5 \text{ K}$, $\theta_f = 217.4 \text{ K}$. Dielectric constant: Fig. 45A-12-001. Pressure effect: Fig. 45A-12-002. Dielectric relaxation: Fig. 45A-12-003, Fig. 45A-12-004; for dielectric relaxation see also			75Ale
c	Spontaneous polarization and coercive field: $P_s = 1.2 \cdot 10^{-2} \text{ C m}^{-2}$, $E_c = 9 \cdot 10^5 \text{ V m}^{-1}$ at about 2°C below θ_f ($f = 60 \text{ Hz}$). Fig. 45A-12-005.			75Ale
9b	Electrooptic effect: see Fig. 45A-6-015 in No. 45A-6 for the quadratic electrooptic effect.			
d	Optical activity: See Table 45A-4-004 in No. 45A-4. See Fig. 45A-6-017 in No. 45A-6 for the electrogyration coefficient.			
13b	ESR: See Table 45A-10-001 in No. 45A-10.			