$Ba_{6.7}Ca_{0.3}Cl_2F_{12}$	*hP*30	(176) $P6_3/m$ – h^4cba

$Ba_{7-x}Ca_xCl_2F_{12}$ [1]
Structural features: Infinite columns of base-linked $Ba(Cl_2F_4)F_3$ tricapped trigonal prisms (one split F site) share atoms to form a 3D-framework with propeller-like columns; Ca and additional Ba in channels of hexagonal cross-section parallel to [001] (partial disorder).

Frühmann B. et al. (2004) [1]
$Ba_{6.70}Ca_{0.30}Cl_2F_{12}$
a = 1.05381, c = 0.42121 nm, c/a = 0.400, V = 0.4051 nm^3, Z = 1

site	Wyck.	sym.	*x*	*y*	*z*	occ.	atomic environment
F1	6*h*	*m*..	0.1154	0.2155	$^1/_4$	0.5	
F2	6*h*	*m*..	0.1498	0.2708	$^1/_4$	0.5	
Ba3	6*h*	*m*..	0.40311	0.29278	$^1/_4$		
F4	6*h*	*m*..	0.43346	0.05625	$^1/_4$		tetrahedron Ba_4
Cl5	2*c*	-6..	$^1/_3$	$^2/_3$	$^1/_4$		
Ca6	2*b*	-3..	0	0	0	0.15	
Ba7	2*a*	-6..	0	0	$^1/_4$	0.35	

Experimental: single crystal, diffractometer, X-rays, R = 0.025, T = 300 K

Remarks: Short interatomic distances for partly occupied site(s).

References: [1] Frühmann B., Kubel F., Hagemann H., Bill H. (2004), Z. Anorg. Allg. Chem. 630, 1484-1488.