

$\text{Sr}_2(\text{Sr}_{0.93}\text{Pb}_{0.07})_3\text{Pb}_3\text{Cu}_{0.66}\text{O}_{11.12}$ $hP24$ $(189) P-62m - \text{kgf}^3\text{e}^2\text{c}$ $\text{Sr}_{4.79}\text{Pb}_{3.21}\text{Cu}_{0.66}\text{O}_{11.12}$ [1]

Structural features: Infinite chains of edge-linked PbO_6 octahedra; Cu in channels of trigonal cross-section (partial disorder).

Kim J.S. et al. (1990) [1]

 $\text{Cu}_{0.66}\text{O}_{11.13}\text{Pb}_{3.21}\text{Sr}_{4.79}$ $a = 1.0072$, $c = 0.3542$ nm, $c/a = 0.352$, $V = 0.3112$ nm³, $Z = 1$

site	Wyck.	sym.	x	y	z	occ.	atomic environment
O1	$6k$	$m..$	0.2412	0.4446	$\frac{1}{2}$		square pyramid PbSr_4
Pb2	$3g$	$m2m$	0.3368	0	$\frac{1}{2}$		octahedron O_6
O3	$3f$	$m2m$	0.17	0	0	0.71	
O4	$3f$	$m2m$	0.4604	0	0		coplanar triangle Pb_2Sr
M5	$3f$	$m2m$	0.7005	0	0		monocapped trigonal prism O_7
Cu6	$2e$	$3.m$	0	0	0.129	0.197	
Cu7	$2e$	$3.m$	0	0	0.388	0.134	
Sr8	$2c$	$-6..$	$\frac{1}{3}$	$\frac{2}{3}$	0		tricapped trigonal prism O_9

 $\text{M5} = 0.93\text{Sr} + 0.07\text{Pb}$ Transformation from published data: origin shift 0 0 $\frac{1}{2}$ Experimental: single crystal, diffractometer, X-rays, $wR = 0.039$

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

References: [1] Kim J.S., Tang X.X., Manthiram A., Swinnea J.S., Steinfink H. (1990), J. Solid State Chem. 85, 44-50.