

(Cr_{0.2}Fe_{0.6}Ni_{0.2})Sn

*hP*6

(183) *P*6*mm* – cba

Fe_{0.6}Cr_{0.2}Ni_{0.2}Sn [1]

Structural features: Directly superposed Kagomé-mesh (Fe,Cr,Ni) layers; Sn in trigonal prismatic voids between the layers and at the centers of the hexagons of the Kagomé mesh. Slightly distorted derivative of CoSn.

Larsson A.K., Lidin S. (1994) [1]

Cr_{0.20}Fe_{0.60}Ni_{0.20}Sn

a = 0.53311, *c* = 0.44332 nm, *c/a* = 0.832, *V* = 0.1091 nm³, *Z* = 3

site	Wyck.	sym.	<i>x</i>	<i>y</i>	<i>z</i>	occ.	atomic environment
M1	3 <i>c</i>	2 <i>mm</i>	$\frac{1}{2}$	0	0.0051		bicapped square antiprism Fe ₄ Sn ₆
Sn2	2 <i>b</i>	3 <i>m.</i>	$\frac{1}{3}$	$\frac{2}{3}$	0.507		tricapped trigonal prism Fe ₆ Sn ₃
Sn3	1 <i>a</i>	6 <i>mm</i>	0	0	0.0		coplanar hexagon Fe ₆

M1 = 0.6Fe + 0.2Cr + 0.2Ni

Experimental: single crystal, diffractometer, X-rays, R = 0.024, T = 300 K

References: [1] Larsson A.K., Lidin S. (1994), Acta Crystallogr. C 50, 13-15.