

substance: ReS₂

property: crystal structure, physical properties

(S: structure (space group), CG: crystal growth (the numbers in parentheses correspond to T_1 and T_2 , the temperatures (in °C) of the hot and cold end of the crystal growth tube, respectively)).

(The references in the last column refer to all data of this document)

lattice parameters

a	6.455 Å	S; triclinic, $C_1^1 - P \bar{1}$. CG: halogen transport (1150/1080)	71W, 83H
b	6.362 Å		
c	6.401 Å		
α	105.04°		
β	91.6°		
γ	118.97°		

density

d	7.506 g cm ⁻³	experimental
	7.613 g cm ⁻³	calculated

resistivity

ρ_{\perp}	10 ³ Ω cm	synthetic single crystal
----------------	----------------------	-----------------------------

energy gap

E_g	1.33 eV	$T = 160...570$ K $T = 570...920$ K	optical gap
$E_{g,th}$	0.4 eV		
	1.0 eV		

References:

- 71W Wildervanck, J. C., Jellinek, F.: J. Less-Common Met 24 (1971) 73.
83H Haza, T., Abe, Y., Okwamoto, Y.: Phys. Rev. Lett. 51 (1983) 678.