



>>Entry Name: Aluminium strontium oxide (Al₂SrO₄)

CAS Registry Number: 12004-37-4

SrAl₂O₄

Molecular Formula: Al₂O₄Sr

Molecular Weight: 205.581

Accurate Mass: 205.848357

Percentage Composition: Al 26.25%; O 31.13%; Sr 42.62%

General Statement: Tridymite (SiO₂) struct. with Sr in the interstices

Source/Synthesis: Synth. from Al₂O₃ and SrCO₃ at 1200°

Use/Importance: Support for lanthanide phosphors

Physical Description: Colourless cryst. (melt)

Other Data: Phase transition occurs at 650°. Related compd. Al₄SrO₇ also descr.

References:

Lagerqvist, K. *et al.*, *Z. Anorg. Allg. Chem.*, 1937, **234**, 1, (*synth*)

Glasser, F.P. *et al.*, *J. Am. Ceram. Soc.*, 1963, **46**, 377, (*synth, cryst struct*)

Palilla, F.C. *et al.*, *J. Electrochem. Soc.*, 1968, **115**, 642, (*use*)

Ito, S. *et al.*, *Z. Phys. Chem. (Munich)*, 1977, **105**, 173; **107**, 50, (*phase transition, solid solns*)

Schulze, A.-R. *et al.*, *Z. Anorg. Allg. Chem.*, 1981, **475**, 205, (*cryst struct*)

Machida, K.-I. *et al.*, *Acta Cryst. B*, 1982, **38**, 889, (*cryst struct, Al₄SrO₇*)