



>>Entry Name: Grossular

Synonym(s): Grossularite

CAS Registry Number: 1302-57-4

Extra CAS Registry Numbers(s): 1327-39-5

$\text{Al}_2\text{Ca}_3(\text{SiO}_4)_3$

Molecular Formula: $\text{Al}_2\text{Ca}_3\text{O}_{12}\text{Si}_3$

Molecular Weight: 450.446

Accurate Mass: 449.720612

replacing Al

Source/Synthesis: Mineral occurs as metamorphosed impure calcareous rock, especially in contact zones. Widespread in western USA, also found in Canada, Italy, USSR, Korea, Australia, Sri Lanka and Switzerland

Physical Description: Colourless cryst. (impurities give grey, yellow, green, brown, black cryst.)

Other Data: SiO_4 may be replaced by 4 OH to give hydrogarnets. $\text{Al}_2\text{Ca}_3(\text{SiO}_4)_x(\text{OH})_{12-4x}$. See Aluminium calcium hydroxide ($\text{Al}_2\text{Ca}_3(\text{OH})_{12}$) [HMQ50-T](#)

References:

Abrahams, S.C. *et al.*, *Acta Cryst.*, 1958, **11**, 437, (*cryst struct*)

Barrer, R.M. *et al.*, *J.C.S.*, 1961, 983, (*synth*)

Prandl, W., *Z. Kristallogr.*, 1966, **123**, 81, (*cryst struct, nd*)

Cohen Addad *et al.*, *Acta Cryst.*, 1967, **23**, 220, (*cryst struct*)

Hazen, R.M. *et al.*, *Am. Mineral.*, 1978, **63**, 297, (*cryst struct*)

Deer, W.A. *et al.*, *Rock Forming Minerals*, 2nd edn., Longman, 1982, **1A**, 603, (*rev*)