



>>Entry Name: Magnesium silicide (Mg₂Si), 8Cl

Synonym(s): Magnesium silicon (2:1)

CAS Registry Number: 22831-39-6

Mg₂Si

Molecular Formula: Mg₂Si

Molecular Weight: 76.696

Accurate Mass: 75.947011

Percentage Composition: Mg 63.38%; Si 36.62%

Source/Synthesis: Prepd. by sintering a 2:1 molar mixture of Mg and Si at 650°

Use/Importance: Commercially available. Semiconductor. Reacts with acids to form silanes

Physical Description: Blue cubic cryst. Moisture sensitive. Dissolves in acids

Melting Point: Mp 1085°

Solubility: Insol. H₂O

Other Data: $\Delta H_f^\circ -77.8 \text{ kJ mol}^{-1}$; $\Delta G_f^\circ -77.1 \text{ kJ mol}^{-1}$; $S^\circ 81.6 \text{ J K}^{-1} \text{ mol}^{-1}$

Aldrich: 34319-6

References:

Klemm, W. *et al.*, *Z. Anorg. Allg. Chem.*, 1940, **245**, 365, (*cryst struct*)

Laughman, L. *et al.*, *Solid State Commun.*, 1971, **9**, 497, (*Raman*)

Bevolo, A.J. *et al.*, *J. Vac. Sci. Technol., A*, 1983, **1**, 574; *CA*, **99**, 13395, (*electronic props*)

Chase, M.W. *et al.*, *J. Phys. Chem. Ref. Data*, 1985, **14**, 1495, (*thermochem data*)

Feher, F., *Z. Anorg. Allg. Chem.*, 1985, **530**, 187, (*synth*)