



>>Entry Name: Silane, 9CI

Synonym(s): Monosilane. Silicon hydride (SiH₄). Silicon tetrahydride. Silicane

CAS Registry Number: 7803-62-5

Related CAS Registry Numbers(s): 13537-07-0

Extra CAS Registry Numbers(s): 50808-20-3

SiH₄

Molecular Formula: H₄Si

Molecular Weight: 32.117

Accurate Mass: 32.008227

Percentage Composition: H 12.55%; Si 87.45%

Source/Synthesis: Synth. by acid hydrol. of Mg₂Si or by LiAlH₄ reduction of SiCl₄ or SiF₄

Use/Importance: Source of hyperpure silicon for semiconductors

Physical Description: Colourless gas with repulsive odour

Melting Point: Mp -185°

Boiling Point: Bp -112°. Bp -111.9°

Solubility: Insol. Et₂O, C₆H₆, CHCl₃, EtOH; insol. H₂O; dec. in KOH aq.

Density: d⁻⁸⁵ 0.068

Other Data: d (gas) 1.44 g l⁻¹

Hazard & Toxicity: Toxic. Spontaneously flammable in air. Mixts. with oxygen are explosive

Aldrich: 29567-1

References:

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