



>>Entry Name: Copper(II) silicate (CuSiO₃)

CAS Registry Number: 16509-17-4
CuSiO₃

Molecular Formula: CuO₃Si
Molecular Weight: 139.63
Accurate Mass: 138.90127
Percentage Composition: Cu 45.51%; O 34.38%; Si 20.11%

>>Variant: Mineral-form
Synonym(s): Dioptase

CAS Registry Number: 15606-25-4
Molecular Formula: CuO₃Si
Molecular Weight: 139.63
Accurate Mass: 138.90127
Percentage Composition: Cu 45.51%; O 34.38%; Si 20.11%
General Statement: Unbranched, monocyclosilicate, corresp. to Cu(H₂SiO₄) or Cu₆(SiO₃)₆·6H₂O
Source/Synthesis: Occurs in the oxidn. zone of Cu deposits
Use/Importance: Cu ore
Physical Description: Rhombohedral, emerald-green cryst.

>>Variant: Mineral-form
Synonym(s): Chrysocolla

CAS Registry Number: 14567-86-3
Molecular Formula: CuO₃Si
Molecular Weight: 139.63
Accurate Mass: 138.90127
Percentage Composition: Cu 45.51%; O 34.38%; Si 20.11%
General Statement: Distorted chain struct. corresp. to Cu(SiO₃)₂·H₂O or (Si₄O₁₀)Cu₈(OH)₁₂
Source/Synthesis: Widespread as a common mineral in the oxidn. zone of Cu deposits
Use/Importance: Minor ore of Cu; ornamental stone
Physical Description: Blue, blue-green or green, amorph.

>>Variant: Mineral-form
Synonym(s): Planchelite

Molecular Formula: CuO₃Si
Molecular Weight: 139.63
Accurate Mass: 138.90127
Percentage Composition: Cu 45.51%; O 34.38%; Si 20.11%
General Statement: Corresp. to CuSiO₃·xH₂O or Cu₈(Si₄O₁₁)₂(OH)₄·xH₂O; comprises brucite-like (CuO₂)_n layers with amphibole-type chains joined to their surfaces
Source/Synthesis: Occurs as a secondary mineral in the oxidn. zone of Cu deposits
Physical Description: Pale to dark blue cryst.

References:

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