



>>Entry Name: Gold(III) chloride (AuCl₃), 10Cl

Synonym(s): Gold trichloride. Auric chloride

CAS Registry Number: 13453-07-1

As Gold(III) bromide (AuBr₃), JMT96-W with
X = Cl

Molecular Formula: AuCl₃

Molecular Weight: 303.325

Accurate Mass: 301.873099

Percentage Composition: Au 64.94%; Cl 35.06%

Other Data: Intercalates into graphite

Aldrich: 37994-8

>>Derivative: Dimer

Synonym(s): Di-μ-chlorotetrachlorodigold, 10Cl. Hexachlorodigold

CAS Registry Number: 21563-00-8

Molecular Formula: Au₂Cl₆

Molecular Weight: 606.649

Accurate Mass: 603.746198

Percentage Composition: Au 64.94%; Cl 35.06%

Source/Synthesis: Synth. from the elements

Use/Importance: Commercially available

Physical Description: V. hygroscopic orange-red cryst. (by subl.)

Melting Point: Mp 200°

References:

Clark, E.S. *et al.*, *Acta Cryst.*, 1958, **11**, 284, (*synth, cryst struct*)

Brauer, G., *Handbuch Prap. Anorg. Chem.*, 3rd edn., Ferdinand Enke Verlag, 1975, **2**, 1013, (*synth*)

Vangelesti, R. *et al.*, *Carbon*, 1977, **15**, 327, (*intercalation compd*)

Lewis, R.J., *Sax's Dangerous Properties of Industrial Materials*, 8th edn., Van Nostrand Reinhold, 1992, GIW176