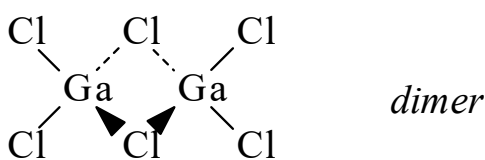




>>Entry Name: Gallium(III) chloride (GaCl₃)

Synonym(s): Gallium trichloride



CAS Registry Number: 13450-90-3

Molecular Formula: Cl₃Ga

Molecular Weight: 176.081

Accurate Mass: 173.832136

Percentage Composition: Cl 60.40%; Ga 39.60%

General Statement: Dimeric in solid, liq. and gas phases

Use/Importance: Promotes Friedel-Crafts (*E*)-β-silylvinilation of aromatic hydrocarbons by HC≡CSiMe₃

Aldrich: 45089-8

Fluka: 48430

>>Derivative: Dimer

Synonym(s): Di-μ-chlorotetrachlorodigallium(III)

Molecular Formula: Cl₆Ga₂

Molecular Weight: 352.162

Accurate Mass: 347.664272

Percentage Composition: Cl 60.40%; Ga 39.60%

Source/Synthesis: Synth. from liq. Ga + Cl₂

Use/Importance: Commercially available. Synth, intermediate for other Ga compounds

Physical Description: White moisture-sensitive cryst.

Melting Point: Mp 76°

Solubility: Sol. hydrocarbons, ethers

>>Derivative: NH₃ complex (monomeric)

Synonym(s): Amminetrichlorogallium(III)

Molecular Formula: Cl₃GaH₃N

Molecular Weight: 193.112

Accurate Mass: 190.858685

Percentage Composition: Cl 55.08%; Ga 36.11%; H 1.57%; N 7.25%

Physical Description: Colourless moisture-sensitive solid

Melting Point: Mp 123°

Boiling Point: Bp 438°

>>Derivative: Hexamethylsilanediamine complex

Synonym(s): Trichloro(hexamethylsilanediamine-*N*)gallium

CAS Registry Number: 136546-92-4

Molecular Formula: C₆H₁₈Cl₃GaN₂Si

Molecular Weight: 322.388

Accurate Mass: 319.956061

Percentage Composition: C 22.35%; H 5.63%; Cl 32.99%; Ga 21.63%; N 8.69%; Si 8.71%

Source/Synthesis: Synth. from bis(dimethylamino)dimethylsilane and GaCl₃ in Et₂O

Physical Description: Colourless cryst. (CH₂Cl₂)

Melting Point: Mp 94-95°

References: