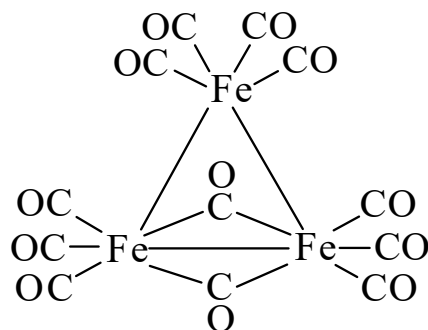




>>Entry Name: Di-μ-carbonyldecacarbonyltriiron, 9CI

Synonym(s): Dodecacarbonyltriiron. Iron tetracarbonyl trimer. Triiron dodecacarbonyl. Iron carbonyl (Fe₃(CO)₁₂)



CAS Registry Number: 17685-52-8

Extra CAS Registry Numbers(s): 12088-65-2

Molecular Formula: C₁₂Fe₃O₁₂

Molecular Weight: 503.666

Accurate Mass: 503.743797

Percentage Composition: C 28.62%; Fe 33.26%; O 38.12%

Source/Synthesis: Synth. from Fe(CO)₅ and NEt₃ in MeOH/HCl

Use/Importance: Catalyst in various reactions e.g. synth. of C₂-C₄ alkenes, alkoxy carbonylation of alkenes, manuf. of polysilazenes. Reducing agent for NO₂ groups, catalyses alkyne trimerisations

Physical Description: Air-sensitive dark green cryst.

Melting Point: Mp 140 dec.°. Mp 165 dec.°

Boiling Point: Subl._{0.1} 70°

Solubility: Spar. sol. hexane, giving intensely coloured solns.

Other Data: Slowly attacked by atmospheric oxygen

Hazard & Toxicity: Pyrophoric when very finely divided

Aldrich: 38141-1

Fluka: 44946

References:

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