



>>Entry Name: Uranium(IV) fluoride (UF₄)

Synonym(s): Uranium tetrafluoride

CAS Registry Number: 10049-14-6

UF₄

Molecular Formula: F₄U

Molecular Weight: 314.022

Accurate Mass: 314.044396

Percentage Composition: F 24.20%; U 75.80%

Source/Synthesis: Synth. from UO₂/HF (550°) or from UO₂/NH₄HF₂ (150°)

Physical Description: Emerald-green, non-volatile, non-hygroscopic solid

Melting Point: Mp 960° (1036°)

Solubility: Insol. H₂O; sol. in solns. of oxidising agents

>>Variant: α-form

Molecular Formula: F₄U

Molecular Weight: 314.022

Accurate Mass: 314.044396

Percentage Composition: F 24.20%; U 75.80%

>>Variant: β-form

Molecular Formula: F₄U

Molecular Weight: 314.022

Accurate Mass: 314.044396

Percentage Composition: F 24.20%; U 75.80%

Physical Description: Pale yellow solid

Solubility: Sl. sol. H₂O

>>Derivative: 2.5 Hydrate

Physical Description: Green cryst.

Other Data: Loses 1 H₂O above 100°. Contains 2 U sites, one with 9F neighbours, the other with 5F and 4O

References:

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Ezhov, U.S. *et al.*, *Zh. Strukt. Khim.*, 1969, **10**, 571, (*ed*)

Krasser, W. *et al.*, *Spectrochim. Acta A*, 1970, **26**, 1059, (*ir, Raman*)

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