



>>Entry Name: Rubidium hydroxide (RbOH), 8Cl

CAS Registry Number: 1310-82-3
RbOH

Molecular Formula: HORb

Molecular Weight: 102.475

Accurate Mass: 101.914534

Percentage Composition: H 0.98%; O 15.61%; Rb 83.40%

Source/Synthesis: Prepd. by dissolution of rubidium oxides in H₂O, or by addn. of aq. Ba(OH)₂ to aq. Rb₂SO₄. Crystallises as the monohydrate

Use/Importance: Commercially available. Neutralisation by acids affords the corresp. Rb salts

Physical Description: Pale grey monoclinic cryst.; deliquescent; undergoes a transition to a second monoclinic polymorph at 94° and a monoclinic to cubic transition at 238°

Melting Point: Mp 301°

Solubility: V. sol. H₂O (180 g per 100 cm³ at 15°)

Other Data: ΔH_f° -418 kJ mol⁻¹; S° 84 J K⁻¹ mol⁻¹

Hazard & Toxicity: Corrosive

Aldrich: 24389-2

>>Derivative: Monohydrate

CAS Registry Number: 34004-84-7

Molecular Formula: H₃O₂Rb

Molecular Weight: 120.49

Accurate Mass: 119.925099

Percentage Composition: H 2.51%; O 26.56%; Rb 70.93%

Use/Importance: Commercially available. Recryst. from supercritical NH₃

Physical Description: Grey-white powder. Dec. on heating by H₂O loss

Solubility: V. sol. H₂O (180 g per 100 cm³ at 15°)

Other Data: ΔH_f° -749 kJ mol⁻¹

Hazard & Toxicity: Corrosive

References:

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