>>**Entry Name: Ytterbium hydrides**

Related CAS Registry Numbers(s): 13967-92-5 85323-76-8

Molecular Formula: [HYb]

>>**Variant: Ytterbium hydride (YbH_2)**

CAS Registry Number: 13598-40-8
Molecular Formula: H_2Yb
Molecular Weight: 175.056
Accurate Mass: 173.951028
Percentage Composition: H 1.15%; Yb 98.85%

Use/Importance: Catalyses hydrogenation of propene. $YbH_{1.2}$ and $YbH_{1.5}$ are semiconductors
Physical Description: Air-stable powder
Other Data: Existence range $YbH_{1.50\text{-}2}$. Diamagnetic. Under high H_2 pressure forms phase of limiting composition $YbH_{2.55}$. ΔH_f –181.3 kJ mol^{-1}

>>**Variant: Ytterbium hydride (YbH_3)**

CAS Registry Number: 32997-62-9
Molecular Formula: H_3Yb
Molecular Weight: 176.064
Accurate Mass: 174.958853
Percentage Composition: H 1.72%; Yb 98.28%
Physical Description: Black solid
Other Data: Exhibits temp. independent paramagenation over range 1.2-4.2K. Obeys Curie-Weiss law 78-295K; $\mu_{eff} = 4.37\mu_B$

References:

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