



>>Entry Name: Yttrium hydrides

Related CAS Registry Numbers(s): 13886-69-6 14067-11-9

Molecular Formula: [HY]

>>Variant: Yttrium hydride (YH₂)

CAS Registry Number: 13598-35-1

Molecular Formula: H₂Y

Molecular Weight: 90.922

Accurate Mass: 90.921499

Percentage Composition: H 2.22%; Y 97.78%

Use/Importance: Studied as neutron attenuation moderator

Physical Description: Cryst.

Other Data: $\Delta H_f^{\circ}(<900^{\circ}) -227.3 \text{ kJ mol}^{-1}$; $\Delta G_f^{\circ} -183.8 \text{ kJ mol}^{-1}$; $S_f^{\circ} -146.1 \text{ J K}^{-1} \text{ mol}^{-1}$

>>Variant: Yttrium hydride (YH₃)

CAS Registry Number: 13598-57-7

Molecular Formula: H₃Y

Molecular Weight: 91.93

Accurate Mass: 91.929324

Percentage Composition: H 3.29%; Y 96.71%

References:

- Keinert, J., *Atomkernenergie*, 1971, **18**, 261; *CA*, **76**, 106953, (*use*)
Miron, N.F. *et al.*, *Kristallografiya*, 1972, **17**, 404, (*cryst struct, YH₃*)
Wallace, W.E., *Ber. Bunsen-Ges. Phys. Chem.*, 1976, **76**, 832, (*magnetism, YH₃*)
Curzon, A.E. *et al.*, *J. Phys. (Paris)*, 1978, **8**, 1619, (*synth, YH₂*)
Markin, V.Ya. *et al.*, *Fiz. Met. Metalloved.*, 1979, **48**, 893; *CA*, **92**, 32954, (*magnetism, YH₂*)
Magee, C.B., *J. Less-Common Met.*, 1980, **72**, 273, (*struct*)
Weaver, J.H. *et al.*, *J. Less-Common Met.*, 1980, **74**, 207, (*pe*)
Khatamian, D. *et al.*, *Phys. Rev. B*, 1980, **21**, 2622, (*cryst struct, YH₂*)
Knight, L.B. *et al.*, *J. Chem. Phys.*, 1981, **74**, 6636, (*epr, YH₂*)
Bishof, R.E. *et al.*, *Helv. Phys. Acta*, 1982, **55**, 3481, (*thermodyn*)
Goldstone, J.A. *et al.*, *Physica B+C (Amsterdam)*, 1986, **136**, 183, (*cryst struct, YH₂*)