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ENTHALPIES OF FORMATION OF WF₅N₃, ReF₅(NCI) AND OF OTHER TRANSITION METAL FLUORIDES WITH METAL—NITROGEN BONDS

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From alkaline hydrolysis measurements the enthalpies of formation of WF_5N_3 (s) and of ReF_5 (NCl)(s) have been estimated to be -1170 and -1195 kJ mol⁻¹ respectively. Assuming the metal-fluoride bond strength to be the same as in the parent fluorides, D(W-N) and D(Re=N) are found to be about 323 and 680 kJ mol⁻¹ respectively. The latter value compares with the D(Re=O) in $ReOF_5$ of 635 kJ mol⁻¹. Similar data will be presented for WF_4NH and for MOF_4 (NCl).

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