

65
MW**BF₄H****Hydrogen fluoride – trifluoroborane (1/1)**
(weakly bound complex)**C_{3v}**
(effective symmetry class)
(large-amplitude motion)
HF · BF₃

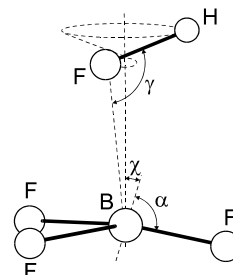
r_0	\AA^a	θ_0	deg^a
B...F	2.544(2)	γ^b	104.1(1)
		χ^b	13.6(4)
		α^b	90.1(5) ^c

The proton is off axis, but rapid vibrational averaging effectively makes the complex a symmetric top in the ground vibrational state. The intermolecular stretching force constant k_σ is estimated to be 8.9 N m⁻¹.

^a) Uncertainties represent sensitivity to approximations and model errors, not estimated standard errors.

^b) See figure for the definition.

^c) Uncertainty is larger than that of the original paper.



Phillips, J.A., Canagaratna, M., Goodfriend, H., Grushow, A., Almlöf, J., Leopold, K.R.:
J. Am. Chem. Soc. **117** (1995) 12549.

Replaces [II/25A\(2, 90\)](#)