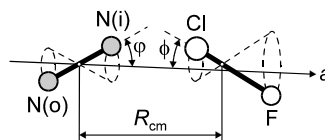


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MWClFN₂**Chlorine fluoride – dinitrogen (1/1)**
(weakly bound complex)**C_{∞v}**
(effective symmetry class)
(large-amplitude motion)ClF · N₂

| Isotopic species | $r_0(R_{\text{cm}})$ [Å] | $r_0[\text{N(i)}\dots\text{Cl}]$ [Å] | $\theta_0(\phi)^a$ [deg] | $\theta_0(\phi)^a$ [deg] |
|--|--------------------------|--------------------------------------|--------------------------|--------------------------|
| ¹⁴ N ₂ · ³⁵ ClF | 4.046(2) | 2.921(2) | 10(3) | 17.8(5) |
| ¹⁵ N ₂ · ³⁵ ClF | 4.045(2) | 2.920(2) | 10(3) | 17.8(5) |
| ¹⁵ N ₂ · ³⁷ ClF | 4.024(2) | 2.920(2) | 10(3) | 17.8(5) |

The complex is shown to have a linear (or nearly linear) arrangement N(o)N(i)·ClF of the nuclei in the equilibrium conformation. The intermolecular stretching force constant is 5.00 N m⁻¹.

^a) See figure for the definition. Average values.



Cooke, S.A., Cotti, G., Hinds, K., Holloway, J.H., Legon, A.C., Lister, D.G.: J. Chem. Soc., Faraday Trans. **92** (1996) 2671.