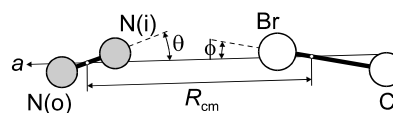


89
MW**BrClN₂****Bromine chloride – dinitrogen (1/1)**
(weakly bound complex)**C_{∞v}**
(effective symmetry class)
(large-amplitude motion)
BrCl · N₂

Isotopic species	$r_0(R_{\text{cm}})^a$ [Å]	$r_0[\text{N(i)...Br}]$ [Å]
¹⁵ N ₂ · ⁷⁹ Br ³⁵ Cl	4.3125(12)	3.1057(12)
¹⁵ N ₂ · ⁸¹ Br ³⁵ Cl	4.3010(12)	3.1057(12)
¹⁵ N ₂ · ⁷⁹ Br ³⁷ Cl	4.3379(12)	3.1056(12)
¹⁵ N ₂ · ⁸¹ Br ³⁷ Cl	4.3262(12)	3.1056(12)

Observed spectra were characteristic of a linear or quasilinear molecule, with Br involved in the weak interaction. The intermolecular stretching force constant is 4.40 N m⁻¹.



^a) Calculated from B_0 assuming $\theta_{\text{av}} = 15(5)^\circ$ and $\phi_{\text{av}} = 6.5(5)^\circ$ (see figure for the definition of θ and ϕ).

Legon, A.C., Ottaviani, P.: Phys. Chem. Chem. Phys. **4** (2002) 441.