

|              |             |       |                   |
|--------------|-------------|-------|-------------------|
| Species Tag: | 36001       | Name: | HCl               |
| Version:     | 3           |       | Hydrochloric acid |
| Date:        | May 2012    |       |                   |
| Contributor: | B.J. Drouin |       |                   |

|                            |        |           |          |
|----------------------------|--------|-----------|----------|
| Lines Listed:              | 137    | Q(300.0)= | 81.397   |
| Freq. (GHz) <              | 9760   | Q(225.0)= | 61.358   |
| Max. J:                    | 18     | Q(150.0)= | 41.345   |
| LOGSTR0=                   | -8.2   | Q(75.00)= | 21.371   |
| LOGSTR1=                   | -11.3  | Q(37.50)= | 11.437   |
| Isotope Corr.:             | -0.122 | Q(18.75)= | 6.583    |
| Egy. (cm <sup>-1</sup> ) > | 0.0    | Q(9.375)= | 4.488    |
| $\mu_a$ =                  | 1.109  | A=        |          |
| $\mu_b$ =                  |        | B=        | 312989.3 |
| $\mu_c$ =                  |        | C=        |          |

The experimental measurements were reported by I. G. Nolt *et al.*, 1987, J. Mol. Spect. **125**, 274. The dipole moment was measured by F. H. De Leeuw and A. Dymanus, 1971, 26th Symposium on Molecular Spectroscopy, Columbus, Ohio.

Version 3 of this catalog entry corrects a constant offset of 2 in the partition function. The tabulated values also include vibrational partitioning, as reported in Fischer et al. JQSRT 82(1-4) 401-412, 2003. Additional values include Q(500 K) = 134.9761; Q(800 K) = 216.7794; and Q(1000 K) = 273.9018.