

# Hydrogen fluoride, positive ion

|                      |                             |
|----------------------|-----------------------------|
| Inchi:               | InChI=1S/FH/h1H/q+1         |
| InchiKey:            | GCZNJFDPFDGYDB-UHFFFAOYSA-N |
| Formula:             | FH+                         |
| SMILES:              | [FH+]                       |
| Mol. weight [g/mol]: | 20.01                       |
| CAS:                 | 12381-92-9                  |

## Physical Properties

| Property code | Value   | Unit    | Source         |
|---------------|---------|---------|----------------|
| gf            | -193.31 | kJ/mol  | Joback Method  |
| hf            | -183.63 | kJ/mol  | Joback Method  |
| hfus          | 0.52    | kJ/mol  | Joback Method  |
| hvap          | 14.63   | kJ/mol  | Joback Method  |
| mcvol         | 12.630  | ml/mol  | McGowan Method |
| pc            | 6389.77 | kPa     | Joback Method  |
| tb            | 197.97  | K       | Joback Method  |
| tc            | 332.95  | K       | Joback Method  |
| tf            | 106.72  | K       | Joback Method  |
| vc            | 0.044   | m3/kmol | Joback Method  |

## Temperature Dependent Properties

| Property code | Value | Unit    | Temperature [K] | Source        |
|---------------|-------|---------|-----------------|---------------|
| cpg           | 5.03  | J/mol×K | 197.97          | Joback Method |
| cpg           | 6.12  | J/mol×K | 220.47          | Joback Method |
| cpg           | 7.08  | J/mol×K | 242.96          | Joback Method |
| cpg           | 7.91  | J/mol×K | 265.46          | Joback Method |
| cpg           | 8.63  | J/mol×K | 287.96          | Joback Method |
| cpg           | 9.23  | J/mol×K | 310.46          | Joback Method |
| cpg           | 9.72  | J/mol×K | 332.95          | Joback Method |

# Sources

|                 |                                                                                                                                               |
|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| McGowan Method: | <a href="http://link.springer.com/article/10.1007/BF02311772">http://link.springer.com/article/10.1007/BF02311772</a>                         |
| NIST Webbook:   | <a href="http://webbook.nist.gov/cgi/cbook.cgi?ID=C12381929&amp;Units=SI">http://webbook.nist.gov/cgi/cbook.cgi?ID=C12381929&amp;Units=SI</a> |
| Joback Method:  | <a href="https://en.wikipedia.org/wiki/Joback_method">https://en.wikipedia.org/wiki/Joback_method</a>                                         |

## Legend

|               |                                                 |
|---------------|-------------------------------------------------|
| <b>cpg:</b>   | Ideal gas heat capacity                         |
| <b>gf:</b>    | Standard Gibbs free energy of formation         |
| <b>hf:</b>    | Enthalpy of formation at standard conditions    |
| <b>hfus:</b>  | Enthalpy of fusion at standard conditions       |
| <b>hvap:</b>  | Enthalpy of vaporization at standard conditions |
| <b>mcvol:</b> | McGowan's characteristic volume                 |
| <b>pc:</b>    | Critical Pressure                               |
| <b>tb:</b>    | Normal Boiling Point Temperature                |
| <b>tc:</b>    | Critical Temperature                            |
| <b>tf:</b>    | Normal melting (fusion) point                   |
| <b>vc:</b>    | Critical Volume                                 |

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