# Ethane, 1,2-dibromo-1,1,2-trifluoro-

**Other names:** 1,2-dibromo-1,1,2-trifluoroethane
**Inchi:** InChI=1S/C2HBr2F3/c3-1(5)2(4,6)7/h1H
**InchiKey:** UREJNEBJDURREH-UHFFFAOYSA-N
**Formula:** C2HBr2F3
**SMILES:** FC(Br)C(F)(F)Br
**Mol. weight [g/mol]:** 241.83
**CAS:** 354-04-1

## Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| hf | -624.88 | kJ/mol | Cheméo Relay (1.0) |
| hfus | 9.81 | kJ/mol | Joback Method |
| hvap | 34.39 | kJ/mol | Cheméo Relay (1.0) |
| ie | 11.04 | eV | Cheméo Relay (1.0) |
| logp | 2.665 | | Crippen Method |
| mcvol | 79.350 | ml/mol | McGowan Method |
| pc | 5251.00 | kPa | Joback Method |
| tb | 349.00 | K | NIST Webbook |
| tb | 349.00 ± 2.00 | K | NIST Webbook |
| tb | 349.00 ± 2.00 | K | NIST Webbook |
| tc | 528.44 | K | Cheméo Relay (1.0) |
| tf | 150.56 | K | Cheméo Relay (1.0) |
| vc | 0.313 | m3/kmol | Cheméo Relay (1.0) |

## Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 118.33 | J/mol×K | 371.62 | Joback Method |
| cpg | 123.60 | J/mol×K | 403.93 | Joback Method |
| cpg | 128.35 | J/mol×K | 436.23 | Joback Method |
| cpg | 132.62 | J/mol×K | 468.54 | Joback Method |
| cpg | 136.44 | J/mol×K | 500.84 | Joback Method |
| cpg | 139.85 | J/mol×K | 533.15 | Joback Method |
| cpg | 142.88 | J/mol×K | 565.45 | Joback Method |

# Correlations

| Information | Value |
|---|---|
| Property code | pvap |
| Equation | ln(Pvp) = A + B/(T + C) |
| Coeff. A | 1.56591e+01 |
| Coeff. B | -3.85322e+03 |
| Temperature range (K), min. | 250.67 |
| Temperature range (K), max. | 372.58 |

# Sources

| | |
|---|---|
| **The Yaws Handbook of Vapor Pressure:** | https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure |
| **NIST Webbook:** | http://webbook.nist.gov/cgi/cbook.cgi?ID=C354041&Units=SI |
| **Joback Method:** | https://en.wikipedia.org/wiki/Joback_method |
| **McGowan Method:** | http://link.springer.com/article/10.1007/BF02311772 |
| **Crippen Method:** | http://pubs.acs.org/doi/abs/10.1021/ci990307l |
| **Crippen Method:** | https://www.chemeo.com/doc/models/crippen_log10ws |
| **Cheméo Relay (1.0):** | |
| **Cheméo Relay (1.0, beta):** | |

# Legend

| | |
|---|---|
| **cpg:** | Ideal gas heat capacity |
| **hf:** | Enthalpy of formation at standard conditions |
| **hfus:** | Enthalpy of fusion at standard conditions |
| **hvap:** | Enthalpy of vaporization at standard conditions |
| **ie:** | Ionization energy |
| **logp:** | Octanol/Water partition coefficient |
| **mcvol:** | McGowan's characteristic volume |
| **pc:** | Critical Pressure |
| **pvap:** | Vapor pressure |
| **tb:** | Normal Boiling Point Temperature |
| **tc:** | Critical Temperature |

**tf:** Normal melting (fusion) point

**vc:** Critical Volume