# Pentabromoethane

**Other names:** Ethane, pentabromo-
**Inchi:** InChI=1S/C2HBr5/c3-1(4)2(5,6)7/h1H
**InchiKey:** OGVPXEPSTZMAFF-UHFFFAOYSA-N
**Formula:** C2HBr5
**SMILES:** BrC(Br)C(Br)(Br)Br
**Mol. weight [g/mol]:** 424.55
**CAS:** 75-95-6

## Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | 37.96 | kJ/mol | Joback Method |
| hf | 33.01 | kJ/mol | Joback Method |
| hfus | 16.42 | kJ/mol | Joback Method |
| hvap | 50.54 | kJ/mol | Joback Method |
| log10ws | -4.53 | | Crippen Method |
| logp | 3.941 | | Crippen Method |
| mcvol | 126.540 | ml/mol | McGowan Method |
| pc | 9281.22 | kPa | Joback Method |
| tb | 572.29 | K | Joback Method |
| tc | 863.92 | K | Joback Method |
| tf | 398.72 | K | Joback Method |
| vc | 0.441 | m3/kmol | Joback Method |

## Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 157.08 | J/mol×K | 572.29 | Joback Method |
| cpg | 164.77 | J/mol×K | 815.31 | Joback Method |
| cpg | 163.88 | J/mol×K | 766.71 | Joback Method |
| cpg | 162.84 | J/mol×K | 718.10 | Joback Method |
| cpg | 161.48 | J/mol×K | 669.50 | Joback Method |
| cpg | 159.62 | J/mol×K | 620.89 | Joback Method |
| cpg | 165.68 | J/mol×K | 863.92 | Joback Method |
| dvisc | 0.0003351 | Pa×s | 572.29 | Joback Method |

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|---|---|---|---|---|
| dvisc | 0.0004113 | Pa×s | 543.36 | Joback Method |
| dvisc | 0.0005165 | Pa×s | 514.43 | Joback Method |
| dvisc | 0.0006665 | Pa×s | 485.50 | Joback Method |
| dvisc | 0.0008882 | Pa×s | 456.58 | Joback Method |
| dvisc | 0.0012307 | Pa×s | 427.65 | Joback Method |
| dvisc | 0.0017878 | Pa×s | 398.72 | Joback Method |

# Sources

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|---|---|
| **Joback Method:** | https://en.wikipedia.org/wiki/Joback_method |
| **McGowan Method:** | http://link.springer.com/article/10.1007/BF02311772 |
| **NIST Webbook:** | http://webbook.nist.gov/cgi/cbook.cgi?ID=C75956&Units=SI |
| **Crippen Method:** | http://pubs.acs.org/doi/abs/10.1021/ci990307l |
| **Crippen Method:** | https://www.chemeo.com/doc/models/crippen_log10ws |

# Legend

| | |
|---|---|
| **cpg:** | Ideal gas heat capacity |
| **dvisc:** | Dynamic viscosity |
| **gf:** | Standard Gibbs free energy of formation |
| **hf:** | Enthalpy of formation at standard conditions |
| **hfus:** | Enthalpy of fusion at standard conditions |
| **hvap:** | Enthalpy of vaporization at standard conditions |
| **log10ws:** | Log10 of Water solubility in mol/l |
| **logp:** | Octanol/Water partition coefficient |
| **mcvol:** | McGowan's characteristic volume |
| **pc:** | Critical Pressure |
| **tb:** | Normal Boiling Point Temperature |
| **tc:** | Critical Temperature |
| **tf:** | Normal melting (fusion) point |
| **vc:** | Critical Volume |