# p-Trifluoromethylpropiophenone

**Inchi:** InChI=1S/C10H9F3O/c1-2-9(14)7-3-5-8(6-4-7)10(11,12)13/h3-6H,2H2,1H3
**InchiKey:** QFKOWENRSZZLPK-UHFFFAOYSA-N
**Formula:** C10H9F3O
**SMILES:** CCC(=O)c1ccc(C(F)(F)F)cc1
**Mol. weight [g/mol]:** 202.17
**CAS:** 711-33-1

## Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | -574.41 | kJ/mol | Joback Method |
| hf | -734.33 | kJ/mol | Joback Method |
| hfus | 18.73 | kJ/mol | Joback Method |
| hvap | 43.79 | kJ/mol | Joback Method |
| log10ws | -3.65 | | Crippen Method |
| logp | 3.298 | | Crippen Method |
| mcvol | 134.880 | ml/mol | McGowan Method |
| pc | 2726.86 | kPa | Joback Method |
| tb | 508.31 | K | Joback Method |
| tc | 705.35 | K | Joback Method |
| tf | 295.52 | K | Joback Method |
| vc | 0.536 | m3/kmol | Joback Method |

## Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 304.82 | J/mol×K | 508.31 | Joback Method |
| cpg | 317.42 | J/mol×K | 541.15 | Joback Method |
| cpg | 329.18 | J/mol×K | 573.99 | Joback Method |
| cpg | 340.17 | J/mol×K | 606.83 | Joback Method |
| cpg | 350.41 | J/mol×K | 639.67 | Joback Method |
| cpg | 359.95 | J/mol×K | 672.51 | Joback Method |
| cpg | 368.83 | J/mol×K | 705.35 | Joback Method |

# Pressure Dependent Properties

| Property code | Value | Unit | Pressure [kPa] | Source |
|---|---|---|---|---|
| tbrp | 356.50 ± 0.50 | K | 0.08 | NIST Webbook |

# 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=C711331&Units=SI |
| **Crippen Method:** | http://pubs.acs.org/doi/abs/10.1021/ci990307l |
| **Crippen Method:** | https://www.chemeo.com/doc/models/crippen_log10ws |

# Legend

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|---|---|
| **cpg:** | Ideal gas heat capacity |
| **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 |
| **tbrp:** | Boiling point at reduced pressure |
| **tc:** | Critical Temperature |
| **tf:** | Normal melting (fusion) point |
| **vc:** | Critical Volume |