# METHANONE, PHENYL(2,4,6-TRIMETHYLPHENYL)-

**Other names:** 2,4,6-Trimethylbenzophenone
2,4,6-Trimetilbenzofenon
Ketone, mesityl phenyl
Mesityl phenyl ketone
Mesitylene, 2-benzoyl-
Methanone, phenyl(2,4,6-trimethylphenyl)-

**Inchi:** InChI=1S/C16H16O/c1-11-9-12(2)15(13(3)10-11)16(17)14-7-5-4-6-8-14/h4-10H,1-3H3

**InchiKey:** HPAFOABSQZMTHE-UHFFFAOYSA-N

**Formula:** C16H16O

**SMILES:** Cc1cc(C)c(C(=O)c2ccccc2)c(C)c1

**Mol. weight [g/mol]:** 224.30

## Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| af | 0.5869 | | Cheméo Relay (1.0) |
| gf | 150.85 | kJ/mol | Joback Method |
| hf | -34.18 | kJ/mol | Cheméo Relay (1.0) |
| hfus | 25.71 | kJ/mol | Joback Method |
| hvap | 87.16 | kJ/mol | Cheméo Relay (1.0) |
| ie | 8.00 | eV | NIST Webbook |
| ie | 8.32 | eV | NIST Webbook |
| log10ws | -4.76 | | Cheméo Relay (1.0) |
| logp | 3.843 | | Crippen Method |
| mcvol | 190.350 | ml/mol | McGowan Method |
| pc | 2324.78 | kPa | Joback Method |
| tb | 605.44 | K | Cheméo Relay (1.0) |
| tc | 861.82 | K | Cheméo Relay (1.0) |
| tf | 329.41 | K | Cheméo Relay (1.0) |
| vc | 0.694 | m3/kmol | Cheméo Relay (1.0) |

## Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 489.90 | J/mol×K | 687.65 | Joback Method |

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|---|---|---|---|---|
| cpg | 506.00 | J/mol×K | 727.48 | Joback Method |
| cpg | 520.93 | J/mol×K | 767.30 | Joback Method |
| cpg | 534.74 | J/mol×K | 807.13 | Joback Method |
| cpg | 547.50 | J/mol×K | 846.96 | Joback Method |
| cpg | 559.24 | J/mol×K | 886.78 | Joback Method |
| cpg | 570.04 | J/mol×K | 926.61 | Joback Method |
| dvisc | 0.0010758 | Pa×s | 410.41 | Joback Method |
| dvisc | 0.0006609 | Pa×s | 456.62 | Joback Method |
| dvisc | 0.0004440 | Pa×s | 502.82 | Joback Method |
| dvisc | 0.0003190 | Pa×s | 549.03 | Joback Method |
| dvisc | 0.0002412 | Pa×s | 595.24 | Joback Method |
| dvisc | 0.0001899 | Pa×s | 641.44 | Joback Method |
| dvisc | 0.0001544 | Pa×s | 687.65 | Joback Method |

# Sources

**Cheméo Relay (1.0):**

**Cheméo Relay (1.0, beta):**

**NIST Webbook:** http://webbook.nist.gov/cgi/cbook.cgi?ID=C954165&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

# Legend

**af:** Acentric Factor
**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
**ie:** Ionization energy
**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 |