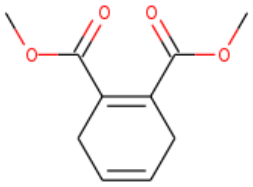
# Dimethyl 1,4-cyclohexadiene-1,2-dicarboxylate

**InChI**: InChI=1S/C10H12O4/c1-13-9(11)7-5-3-4-6-8(7)10(12)14-2/h3-4H,5-6H2,1-2H3
**InChI Key**: LHDSILFDQOEEGI-UHFFFAOYSA-N
**Formula**: C10H12O4
**SMILES**: COC(=O)C1=C(C(=O)OC)CC=CC1
**Molecular Weight**: 196.20
**CAS**: 14309-54-7



## Physical Properties

| Property | Value | Unit | Source |
|---|---|---|---|
| $\Delta_f G°$ | -361.70 | kJ/mol | Joback Method |
| $\Delta_f H°_{gas}$ | -572.05 | kJ/mol | Joback Method |
| $\Delta_{fus} H°$ | 19.66 | kJ/mol | Joback Method |
| $\Delta_{vap} H°$ | 58.81 | kJ/mol | Joback Method |
| $logP_{oct/wat}$ | 0.979 | | Crippen Method |
| $P_c$ | 3065.95 | kPa | Joback Method |
| $T_{boil}$ | 613.28 | K | Joback Method |
| $T_c$ | 830.36 | K | Joback Method |
| $T_{fus}$ | 384.96 | K | Joback Method |
| $V_c$ | 0.549 | $m^3$/kg-mol | Joback Method |

## Temperature Dependent Properties

| Property | Value | Unit | Temperature (K) | Source |
|---|---|---|---|---|
| $C_{p,gas}$ | 359.89 | J/mol×K | 613.28 | Joback Method |
| η | 0.0001769 | Pa×s | 613.28 | Joback Method |

## Sources

**Joback Method**: https://en.wikipedia.org/wiki/Joback_method
**NIST Webbook**: http://webbook.nist.gov/cgi/inchi/InChI=1S/C10H12O4/c1-13-9(11)7-5-3-4-6-8(7)10(12)14-2/h3-4H,5-6H2,1-2H3
**Crippen Method**: http://pubs.acs.org/doi/abs/10.1021/ci990307l

## Legend

$\mathbf{C_{p,gas}}$: Ideal gas heat capacity (J/mol×K).
η: Dynamic viscosity (Pa×s).
$\Delta_f\mathbf{G°}$: Standard Gibbs free energy of formation (kJ/mol).
$\Delta_f\mathbf{H°_{gas}}$: Enthalpy of formation at standard conditions (kJ/mol).
$\Delta_{fus}\mathbf{H°}$: Enthalpy of fusion at standard conditions (kJ/mol).
$\Delta_{vap}\mathbf{H°}$: Enthalpy of vaporization at standard conditions (kJ/mol).
$\boldsymbol{log}\mathbf{P_{oct/wat}}$: Octanol/Water partition coefficient .
$\mathbf{P_c}$: Critical Pressure (kPa).
$\mathbf{T_{boil}}$: Normal Boiling Point Temperature (K).
$\mathbf{T_c}$: Critical Temperature (K).
$\mathbf{T_{fus}}$: Normal melting (fusion) point (K).
$\mathbf{V_c}$: Critical Volume ($m^3$/kg-mol).