

# cis,trans-Bicyclo[4.4.0]decane, 2-ethyl

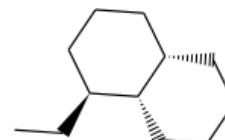
**InChI:** InChI=1S/C12H22/c1-2-10-7-5-8-11-6-3-4-9-12(10)11/h10-12H,2-9H2,1H3/t10-,11-,12+/m1/s1

**InChI Key:** HUMCBDCARGDFNV-UTUOFQBUSA-N

**Formula:** C12H22

**SMILES:** CCC1CCCC2CCCCC12

**Molecular Weight:** 166.30



## Physical Properties

| Property                        | Value   | Unit                   | Source         |
|---------------------------------|---------|------------------------|----------------|
| $\Delta_f G^\circ$              | 115.55  | kJ/mol                 | Joback Method  |
| $\Delta_f H^\circ_{\text{gas}}$ | -190.39 | kJ/mol                 | Joback Method  |
| $\Delta_{\text{fus}} H^\circ$   | 15.78   | kJ/mol                 | Joback Method  |
| $\Delta_{\text{vap}} H^\circ$   | 42.51   | kJ/mol                 | Joback Method  |
| $\log P_{\text{oct/wat}}$       | 4.00    |                        | Crippen Method |
| $P_c$                           | 2395.87 | kPa                    | Joback Method  |
| $T_{\text{boil}}$               | 499.85  | K                      | Joback Method  |
| $T_c$                           | 714.86  | K                      | Joback Method  |
| $T_{\text{fus}}$                | 242.56  | K                      | Joback Method  |
| $V_c$                           | 0.59    | m <sup>3</sup> /kg-mol | Joback Method  |

## Temperature Dependent Properties

| Property           | Value  | Unit    | Temperature (K) | Source        |
|--------------------|--------|---------|-----------------|---------------|
| $C_{p,\text{gas}}$ | 382.91 | J/mol×K | 499.85          | Joback Method |
| $\eta$             | 0.00   | Paxs    | 499.85          | Joback Method |

## Sources

**Joback Method:** [https://en.wikipedia.org/wiki/Joback\\_method](https://en.wikipedia.org/wiki/Joback_method)

**NIST Webbook:** [http://webbook.nist.gov/cgi/inchi/InChI=1S/C12H22/c1-2-10-7-5-8-11-6-3-4-9-12\(10\)11/h10-12H,2-9H2,1H3/t10-,11-,12+/m1/s1](http://webbook.nist.gov/cgi/inchi/InChI=1S/C12H22/c1-2-10-7-5-8-11-6-3-4-9-12(10)11/h10-12H,2-9H2,1H3/t10-,11-,12+/m1/s1)

**Crippen Method:** <http://pubs.acs.org/doi/abs/10.1021/ci9903071>

## Legend

$C_{p,gas}$ : Ideal gas heat capacity (J/molxK).

$\eta$ : Dynamic viscosity (Pa $\times$ s).

$\Delta_f G^\circ$ : Standard Gibbs free energy of formation (kJ/mol).

$\Delta_f H^\circ_{gas}$ : Enthalpy of formation at standard conditions (kJ/mol).

$\Delta_{fus} H^\circ$ : Enthalpy of fusion at standard conditions (kJ/mol).

$\Delta_{vap} H^\circ$ : Enthalpy of vaporization at standard conditions (kJ/mol).

$logP_{oct/wat}$ : Octanol/Water partition coefficient .

$P_c$ : Critical Pressure (kPa).

$T_{boil}$ : Normal Boiling Point Temperature (K).

$T_c$ : Critical Temperature (K).

$T_{fus}$ : Normal melting (fusion) point (K).

$V_c$ : Critical Volume (m<sup>3</sup>/kg-mol).

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