

# Glutaric acid, butyl 4-fluorobenzyl ester

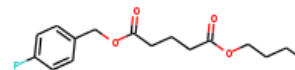
**InChI:** InChI=1S/C16H21FO4/c1-2-3-11-20-15(18)5-4-6-16(19)21-12-13-7-9-14(17)10-8-13/h7-10H,2-6,11-12H2,1H3

**InChI Key:** RLRGJPOGNUPZFR-UHFFFAOYSA-N

**Formula:** C16H21FO4

**SMILES:** CCCOC(=O)CCCC(=O)OCc1ccc(F)cc1

**Molecular Weight:** 296.33



## Physical Properties

| Property                        | Value   | Unit                   | Source         |
|---------------------------------|---------|------------------------|----------------|
| $\Delta_f G^\circ$              | -476.03 | kJ/mol                 | Joback Method  |
| $\Delta_f H^\circ_{\text{gas}}$ | -834.22 | kJ/mol                 | Joback Method  |
| $\Delta_{\text{fus}} H^\circ$   | 39.50   | kJ/mol                 | Joback Method  |
| $\Delta_{\text{vap}} H^\circ$   | 71.64   | kJ/mol                 | Joback Method  |
| $\log P_{\text{oct/wat}}$       | 3.38    |                        | Crippen Method |
| $P_c$                           | 1749.21 | kPa                    | Joback Method  |
| $T_{\text{boil}}$               | 748.99  | K                      | Joback Method  |
| $T_c$                           | 944.39  | K                      | Joback Method  |
| $T_{\text{fus}}$                | 453.93  | K                      | Joback Method  |
| $V_c$                           | 0.89    | m <sup>3</sup> /kg-mol | Joback Method  |

## Temperature Dependent Properties

| Property           | Value  | Unit    | Temperature (K) | Source        |
|--------------------|--------|---------|-----------------|---------------|
| $C_{p,\text{gas}}$ | 656.18 | J/mol×K | 748.99          | 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/C16H21FO4/c1-2-3-11-20-15\(18\)5-4-6-16\(19\)21-12-13-7-9-14\(17\)10-8-13/h7-10H,2-6,11-12H2,1H3](http://webbook.nist.gov/cgi/inchi/InChI=1S/C16H21FO4/c1-2-3-11-20-15(18)5-4-6-16(19)21-12-13-7-9-14(17)10-8-13/h7-10H,2-6,11-12H2,1H3)

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

## Legend

$C_{p, \text{gas}}$ : Ideal gas heat capacity (J/mol×K).

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

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

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

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

$\log P_{\text{oct/wat}}$ : Octanol/Water partition coefficient .

$P_c$ : Critical Pressure (kPa).

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

$T_c$ : Critical Temperature (K).

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

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

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