

# Bis(fluoroxy)perfluoromethane

**Inchi:** InChI=1S/CF4O2/c2-1(3,6-4)7-5  
**InchiKey:** GMLJCMXFMUEABC-UHFFFAOYSA-N  
**Formula:** CF4O2  
**SMILES:** FOC(F)(F)OF  
**Mol. weight [g/mol]:** 120.00  
**CAS:** 16282-67-0

## Physical Properties

| Property code | Value          | Unit    | Source         |
|---------------|----------------|---------|----------------|
| gf            | -1028.86       | kJ/mol  | Joback Method  |
| hf            | -564.00 ± 2.00 | kJ/mol  | NIST Webbook   |
| hfus          | 5.63           | kJ/mol  | Joback Method  |
| hvap          | 18.08          | kJ/mol  | Joback Method  |
| log10ws       | -1.41          |         | Crippen Method |
| logp          | 1.339          |         | Crippen Method |
| mcvol         | 43.770         | ml/mol  | McGowan Method |
| pc            | 4391.59        | kPa     | Joback Method  |
| tb            | 260.97         | K       | Joback Method  |
| tc            | 396.27         | K       | Joback Method  |
| tf            | 150.27         | K       | Joback Method  |
| vc            | 0.189          | m3/kmol | Joback Method  |

## Temperature Dependent Properties

| Property code | Value  | Unit    | Temperature [K] | Source        |
|---------------|--------|---------|-----------------|---------------|
| cpg           | 87.42  | J/mol×K | 260.97          | Joback Method |
| cpg           | 90.06  | J/mol×K | 283.52          | Joback Method |
| cpg           | 92.64  | J/mol×K | 306.07          | Joback Method |
| cpg           | 95.17  | J/mol×K | 328.62          | Joback Method |
| cpg           | 97.63  | J/mol×K | 351.17          | Joback Method |
| cpg           | 100.02 | J/mol×K | 373.72          | Joback Method |
| cpg           | 102.36 | J/mol×K | 396.27          | Joback Method |

# Sources

|                        |                                                                                                                                               |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Crippen Method:</b> | <a href="http://pubs.acs.org/doi/abs/10.1021/ci990307I">http://pubs.acs.org/doi/abs/10.1021/ci990307I</a>                                     |
| <b>Crippen Method:</b> | <a href="https://www.chemeo.com/doc/models/crippen_log10ws">https://www.chemeo.com/doc/models/crippen_log10ws</a>                             |
| <b>Joback Method:</b>  | <a href="https://en.wikipedia.org/wiki/Joback_method">https://en.wikipedia.org/wiki/Joback_method</a>                                         |
| <b>McGowan Method:</b> | <a href="http://link.springer.com/article/10.1007/BF02311772">http://link.springer.com/article/10.1007/BF02311772</a>                         |
| <b>NIST Webbook:</b>   | <a href="http://webbook.nist.gov/cgi/cbook.cgi?ID=C16282670&amp;Units=SI">http://webbook.nist.gov/cgi/cbook.cgi?ID=C16282670&amp;Units=SI</a> |

## Legend

|                 |                                                 |
|-----------------|-------------------------------------------------|
| <b>cpg:</b>     | Ideal gas heat capacity                         |
| <b>gf:</b>      | Standard Gibbs free energy of formation         |
| <b>hf:</b>      | Enthalpy of formation at standard conditions    |
| <b>hfus:</b>    | Enthalpy of fusion at standard conditions       |
| <b>hvap:</b>    | Enthalpy of vaporization at standard conditions |
| <b>log10ws:</b> | Log10 of Water solubility in mol/l              |
| <b>logp:</b>    | Octanol/Water partition coefficient             |
| <b>mcvol:</b>   | McGowan's characteristic volume                 |
| <b>pc:</b>      | Critical Pressure                               |
| <b>tb:</b>      | Normal Boiling Point Temperature                |
| <b>tc:</b>      | Critical Temperature                            |
| <b>tf:</b>      | Normal melting (fusion) point                   |
| <b>vc:</b>      | Critical Volume                                 |

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