

# Thiophen3(2H)-one, 4,5-dihydro-2,4-dimethyl, #2 (E or Z)

Inchi: InChI=1S/C6H10OS/c1-4-3-8-5(2)6(4)7/h4-5H,3H2,1-2H3  
InchiKey: HOMIEGBJQNRINM-UHFFFAOYSA-N  
Formula: C6H10OS  
SMILES: CC1CSC(C)C1=O  
Mol. weight [g/mol]: 130.21

## Physical Properties

| Property code | Value   | Unit                 | Source         |
|---------------|---------|----------------------|----------------|
| gf            | -54.25  | kJ/mol               | Joback Method  |
| hf            | -219.47 | kJ/mol               | Joback Method  |
| hfus          | 9.47    | kJ/mol               | Joback Method  |
| hvap          | 38.96   | kJ/mol               | Joback Method  |
| log10ws       | -1.26   |                      | Crippen Method |
| logp          | 1.327   |                      | Crippen Method |
| mvol          | 102.460 | ml/mol               | McGowan Method |
| pc            | 3819.82 | kPa                  | Joback Method  |
| rinpol        | 1027.00 |                      | NIST Webbook   |
| rinpol        | 1027.00 |                      | NIST Webbook   |
| tb            | 462.94  | K                    | Joback Method  |
| tc            | 696.13  | K                    | Joback Method  |
| tf            | 315.71  | K                    | Joback Method  |
| vc            | 0.364   | m <sup>3</sup> /kmol | Joback Method  |

## Temperature Dependent Properties

| Property code | Value  | Unit    | Temperature [K] | Source        |
|---------------|--------|---------|-----------------|---------------|
| cpg           | 209.01 | J/molxK | 462.94          | Joback Method |
| cpg           | 222.94 | J/molxK | 501.81          | Joback Method |
| cpg           | 236.26 | J/molxK | 540.67          | Joback Method |
| cpg           | 248.97 | J/molxK | 579.54          | Joback Method |
| cpg           | 261.06 | J/molxK | 618.40          | Joback Method |
| cpg           | 272.52 | J/molxK | 657.27          | Joback Method |
| cpg           | 283.33 | J/molxK | 696.13          | Joback Method |

# Sources

|                        |   |
|------------------------|---|
| <b>Crippen Method:</b> | <a href="http://pubs.acs.org/doi/abs/10.1021/ci9903071">http://pubs.acs.org/doi/abs/10.1021/ci9903071</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=R90783&amp;Units=SI">http://webbook.nist.gov/cgi/cbook.cgi?ID=R90783&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>hvp:</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>rinp:</b>    | Non-polar retention indices                     |
| <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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