

# 10,14,18,22-Tetramethyloctatriacontane

**Inchi:** InChI=1S/C42H86/c1-7-9-11-13-15-16-17-18-19-20-21-23-25-27-32-40(4)34-29-36-42(6)  
**InchiKey:** ISWSPBUJMLQSDU-UHFFFAOYSA-N  
**Formula:** C42H86  
**SMILES:** CCCCCCCCCCCCCCCCC(C)CCCC(C)CCCC(C)CCCC(C)CCCCCCCCC  
**Mol. weight [g/mol]:** 591.13

## Physical Properties

| Property code | Value   | Unit    | Source         |
|---------------|---------|---------|----------------|
| gf            | 293.00  | kJ/mol  | Joback Method  |
| hf            | -931.33 | kJ/mol  | Joback Method  |
| hfus          | 90.44   | kJ/mol  | Joback Method  |
| hvap          | 107.53  | kJ/mol  | Joback Method  |
| log10ws       | -16.44  |         | Crippen Method |
| logp          | 16.054  |         | Crippen Method |
| mcvol         | 602.640 | ml/mol  | McGowan Method |
| pc            | 367.28  | kPa     | Joback Method  |
| rinpol        | 3900.00 |         | NIST Webbook   |
| tb            | 1158.60 | K       | Joback Method  |
| tc            | 1560.30 | K       | Joback Method  |
| tf            | 503.10  | K       | Joback Method  |
| vc            | 2.364   | m3/kmol | Joback Method  |

## Temperature Dependent Properties

| Property code | Value     | Unit    | Temperature [K] | Source        |
|---------------|-----------|---------|-----------------|---------------|
| cpg           | 2317.22   | J/mol×K | 1158.60         | Joback Method |
| cpg           | 2362.17   | J/mol×K | 1225.55         | Joback Method |
| cpg           | 2402.78   | J/mol×K | 1292.50         | Joback Method |
| cpg           | 2439.92   | J/mol×K | 1359.45         | Joback Method |
| cpg           | 2474.46   | J/mol×K | 1426.40         | Joback Method |
| cpg           | 2507.29   | J/mol×K | 1493.35         | Joback Method |
| cpg           | 2539.27   | J/mol×K | 1560.30         | Joback Method |
| dvisc         | 0.0003438 | Pa×s    | 503.10          | Joback Method |
| dvisc         | 0.0000718 | Pa×s    | 612.35          | Joback Method |

|       |           |      |         |               |
|-------|-----------|------|---------|---------------|
| dvisc | 0.0000241 | Pa×s | 721.60  | Joback Method |
| dvisc | 0.0000108 | Pa×s | 830.85  | Joback Method |
| dvisc | 0.0000058 | Pa×s | 940.10  | Joback Method |
| dvisc | 0.0000036 | Pa×s | 1049.35 | Joback Method |
| dvisc | 0.0000024 | Pa×s | 1158.60 | Joback Method |

## Sources

|                        |                                                                                                                                           |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| <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=R555036&amp;Units=SI">http://webbook.nist.gov/cgi/cbook.cgi?ID=R555036&amp;Units=SI</a> |
| <b>Crippen Method:</b> | <a href="http://pubs.acs.org/doi/abs/10.1021/ci990307l">http://pubs.acs.org/doi/abs/10.1021/ci990307l</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>                                     |

## Legend

|                 |                                                 |
|-----------------|-------------------------------------------------|
| <b>cpg:</b>     | Ideal gas heat capacity                         |
| <b>dvisc:</b>   | Dynamic viscosity                               |
| <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>rinpol:</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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