

# thiobis(ethane-2,1-diyl)bis(3-(3,5-di-tert-butyl-4-hydroxyphenyl)propanoate)

**Inchi:** InChI=1S/C38H58O6S/c1-35(2,3)27-21-25(22-28(33(27)41)36(4,5)6)13-15-31(39)43-17-  
**InchiKey:** VFBJXXJYHWLXRM-UHFFFAOYSA-N  
**Formula:** C38H58O6S  
**SMILES:** CC(C)(C)c1cc(CCC(=O)OCCSCCOC(=O)CCc2cc(C(C)(C)C)c(O)c(C(C)(C)C)c2)cc(C(C)(C)C)c1  
**Mol. weight [g/mol]:** 642.94

## Physical Properties

| Property code | Value   | Unit   | Source             |
|---------------|---------|--------|--------------------|
| hfus          | 72.32   | kJ/mol | Joback Method      |
| logp          | 8.673   |        | Crippen Method     |
| mcvol         | 541.730 | ml/mol | McGowan Method     |
| tf            | 387.92  | K      | Cheméo Relay (1.0) |

## Temperature Dependent Properties

| Property code | Value   | Unit    | Temperature [K] | Source        |
|---------------|---------|---------|-----------------|---------------|
| cpg           | 2211.74 | J/mol×K | 1511.80         | Joback Method |
| cpg           | 2284.67 | J/mol×K | 1581.26         | Joback Method |
| cpg           | 2367.39 | J/mol×K | 1650.72         | Joback Method |
| cpg           | 2461.48 | J/mol×K | 1720.18         | Joback Method |
| cpg           | 2568.53 | J/mol×K | 1789.64         | Joback Method |
| cpg           | 2690.14 | J/mol×K | 1859.10         | Joback Method |
| cpg           | 2827.90 | J/mol×K | 1928.56         | Joback Method |

## Sources

Thermodynamic Properties of Polymorphs of 2,2'-Thiodiethylene  
**Joback Method:** <https://www.doi.org/10.1021/je500869p>  
[https://en.wikipedia.org/wiki/Joback\\_method](https://en.wikipedia.org/wiki/Joback_method)  
**McGowan Method:** <http://link.springer.com/article/10.1007/BF02311772>  
**Crippen Method:** <http://pubs.acs.org/doi/abs/10.1021/ci990307l>  
**Crippen Method:** [https://www.chemeo.com/doc/models/crippen\\_log10ws](https://www.chemeo.com/doc/models/crippen_log10ws)

Cheméo Relay (1.0):

Cheméo Relay (1.0, beta):

## Legend

|               |                                           |
|---------------|-------------------------------------------|
| <b>cpg:</b>   | Ideal gas heat capacity                   |
| <b>hfus:</b>  | Enthalpy of fusion at standard conditions |
| <b>logp:</b>  | Octanol/Water partition coefficient       |
| <b>mcvol:</b> | McGowan's characteristic volume           |
| <b>tf:</b>    | Normal melting (fusion) point             |

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