

trans,trans-2,8-Decadiene

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|-----------------------------|---|
| Other names: | (2E,8E)-2,8-Decadiene 2,8-Decadiene, (E,E) |
| Inchi: | InChI=1S/C10H18/c1-3-5-7-9-10-8-6-4-2/h3-6H,7-10H2,1-2H3/b5-3+,6-4+ |
| InchiKey: | ZIWONNNFUQQNAZ-GGWOSOGESA-N |
| Formula: | C10H18 |
| SMILES: | CC=CCCCC=CC |
| Mol. weight [g/mol]: | 138.25 |
| CAS: | 19398-85-7 |

Physical Properties

| Property code | Value | Unit | Source |
|---------------|---------|----------------------|----------------|
| gf | 193.76 | kJ/mol | Joback Method |
| hf | -15.29 | kJ/mol | Joback Method |
| hfus | 22.06 | kJ/mol | Joback Method |
| hvap | 37.77 | kJ/mol | Joback Method |
| log10ws | -3.72 | | Crippen Method |
| logp | 3.699 | | Crippen Method |
| mvol | 143.160 | ml/mol | McGowan Method |
| pc | 2324.78 | kPa | Joback Method |
| rinpol | 998.70 | | NIST Webbook |
| tb | 436.52 | K | Joback Method |
| tc | 614.98 | K | Joback Method |
| tf | 192.30 | K | Joback Method |
| vc | 0.555 | m ³ /kmol | Joback Method |

Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---------------|--------|---------|-----------------|---------------|
| cpg | 285.06 | J/mol×K | 436.52 | Joback Method |
| cpg | 299.83 | J/mol×K | 466.26 | Joback Method |
| cpg | 313.89 | J/mol×K | 496.01 | Joback Method |
| cpg | 327.27 | J/mol×K | 525.75 | Joback Method |
| cpg | 340.00 | J/mol×K | 555.49 | Joback Method |
| cpg | 352.10 | J/mol×K | 585.24 | Joback Method |

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|-------|-----------|---------|--------|---------------|
| cpg | 363.62 | J/molxK | 614.98 | Joback Method |
| dvisc | 0.0054554 | Paxs | 192.30 | Joback Method |
| dvisc | 0.0018265 | Paxs | 233.00 | Joback Method |
| dvisc | 0.0008467 | Paxs | 273.71 | Joback Method |
| dvisc | 0.0004790 | Paxs | 314.41 | Joback Method |
| dvisc | 0.0003088 | Paxs | 355.11 | Joback Method |
| dvisc | 0.0002178 | Paxs | 395.82 | Joback Method |
| dvisc | 0.0001640 | Paxs | 436.52 | Joback Method |

Sources

| | |
|------------------------|---|
| Joback Method: | https://en.wikipedia.org/wiki/Joback_method |
| McGowan Method: | http://link.springer.com/article/10.1007/BF02311772 |
| NIST Webbook: | http://webbook.nist.gov/cgi/cbook.cgi?ID=C19398857&Units=SI |
| Crippen Method: | http://pubs.acs.org/doi/abs/10.1021/ci9903071 |
| Crippen Method: | https://www.cheméo.com/doc/models/crippen_log10ws |

Legend

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

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<https://www.cheméo.com/cid/70-374-9/trans-trans-2-8-Decadiene.pdf>

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