# «alpha»,«beta»-3,5-dimethylheptane

**Other names:** 3,5-Dimethylheptane, (D)
**Inchi:** InChI=1S/C9H20/c1-5-8(3)7-9(4)6-2/h8-9H,5-7H2,1-4H3/t8-,9-/m0/s1
**InchiKey:** DZJTZGHZAWTWGA-IUCAKERBSA-N
**Formula:** C9H20
**SMILES:** CCC(C)CC(C)CC
**Mol. weight [g/mol]:** 128.26

## Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | 20.02 | kJ/mol | Joback Method |
| hf | -239.65 | kJ/mol | Joback Method |
| hfus | 12.02 | kJ/mol | Joback Method |
| hvap | 34.85 | kJ/mol | Joback Method |
| log10ws | -3.11 | | Crippen Method |
| logp | 3.469 | | Crippen Method |
| mcvol | 137.670 | ml/mol | McGowan Method |
| pc | 2342.82 | kPa | Joback Method |
| rinpol | 833.30 | | NIST Webbook |
| rinpol | 834.70 | | NIST Webbook |
| rinpol | 827.40 | | NIST Webbook |
| tb | 404.44 | K | Joback Method |
| tc | 574.89 | K | Joback Method |
| tf | 161.19 | K | Joback Method |
| vc | 0.527 | m3/kmol | Joback Method |

## Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 272.52 | J/mol×K | 404.44 | Joback Method |
| cpg | 287.44 | J/mol×K | 432.85 | Joback Method |
| cpg | 301.80 | J/mol×K | 461.26 | Joback Method |
| cpg | 315.61 | J/mol×K | 489.67 | Joback Method |
| cpg | 328.88 | J/mol×K | 518.07 | Joback Method |
| cpg | 341.62 | J/mol×K | 546.48 | Joback Method |

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|---|---|---|---|---|
| cpg | 353.86 | J/mol×K | 574.89 | Joback Method |
| dvisc | 0.0224972 | Pa×s | 161.19 | Joback Method |
| dvisc | 0.0048330 | Pa×s | 201.73 | Joback Method |
| dvisc | 0.0017372 | Pa×s | 242.27 | Joback Method |
| dvisc | 0.0008373 | Pa×s | 282.81 | Joback Method |
| dvisc | 0.0004846 | Pa×s | 323.36 | Joback Method |
| dvisc | 0.0003168 | Pa×s | 363.90 | Joback Method |
| dvisc | 0.0002255 | Pa×s | 404.44 | Joback Method |

# Sources

**McGowan Method:** http://link.springer.com/article/10.1007/BF02311772
**NIST Webbook:** http://webbook.nist.gov/cgi/cbook.cgi?ID=R251942&Units=SI
**Crippen Method:** http://pubs.acs.org/doi/abs/10.1021/ci990307l
**Crippen Method:** https://www.chemeo.com/doc/models/crippen_log10ws
**Joback Method:** https://en.wikipedia.org/wiki/Joback_method

# 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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