# Oxirane, 2-methyl-2-propyl-

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|---|---|
| **Other names:** | Pentane, 1,2-epoxy-2-methyl- |
| | 2-Methyl-1-pentene epoxide |
| | 2-Methyl-1-pentene oxide |
| | 2-Methyl-1,2-epoxypentane |
| | 2-Methyl-2-propyl-oxirane |
| **Inchi:** | InChI=1S/C6H12O/c1-3-4-6(2)5-7-6/h3-5H2,1-2H3 |
| **InchiKey:** | FFXMEOKFDOVSGT-UHFFFAOYSA-N |
| **Formula:** | C6H12O |
| **SMILES:** | CCCC1(C)CO1 |
| **Mol. weight [g/mol]:** | 100.16 |
| **CAS:** | 3657-41-8 |

# Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | -31.22 | kJ/mol | Joback Method |
| hf | -211.13 | kJ/mol | Joback Method |
| hfus | 11.11 | kJ/mol | Joback Method |
| hvap | 32.22 | kJ/mol | Joback Method |
| log10ws | -1.43 | | Crippen Method |
| logp | 1.575 | | Crippen Method |
| mcvol | 90.410 | ml/mol | McGowan Method |
| pc | 3773.04 | kPa | Joback Method |
| rinpol | 736.40 | | NIST Webbook |
| rinpol | 736.40 | | NIST Webbook |
| rinpol | 737.80 | | NIST Webbook |
| rinpol | 737.40 | | NIST Webbook |
| rinpol | 741.00 | | NIST Webbook |
| rinpol | 737.80 | | NIST Webbook |
| tb | 370.61 | K | Joback Method |
| tc | 559.20 | K | Joback Method |
| tf | 225.79 | K | Joback Method |
| vc | 0.347 | m3/kmol | Joback Method |

# Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 169.98 | J/mol×K | 370.61 | Joback Method |
| cpg | 182.87 | J/mol×K | 402.04 | Joback Method |
| cpg | 194.77 | J/mol×K | 433.47 | Joback Method |
| cpg | 205.76 | J/mol×K | 464.91 | Joback Method |
| cpg | 215.93 | J/mol×K | 496.34 | Joback Method |
| cpg | 225.37 | J/mol×K | 527.77 | Joback Method |
| cpg | 234.15 | J/mol×K | 559.20 | Joback Method |

# Sources

**McGowan Method:** http://link.springer.com/article/10.1007/BF02311772
**NIST Webbook:** http://webbook.nist.gov/cgi/cbook.cgi?ID=C3657418&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
**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