# 2-propylresorcinol

**Inchi:** InChl=1S/C9H12O2/c1-2-4-7-8(10)5-3-6-9(7)11/h3,5-6,10-11H,2,4H2,1H3

InchiKey: XDCMHOFEBFTMNL-UHFFFAOYSA-N

Formula: C9H12O2

SMILES: CCCc1c(O)cccc1O

Mol. weight [g/mol]: 152.19

## **Physical Properties**

| Property code | Value   | Unit    | Source  |
|---------------|---------|---------|---|
| gf            | -171.93 | kJ/mol  | Joback Method   |
| hf            | -347.18 | kJ/mol  | Joback Method   |
| hfus          | 24.67   | kJ/mol  | Joback Method   |
| hvap          | 63.93   | kJ/mol  | Joback Method   |
| log10ws       | -1.79   |         | Crippen Method  |
| logp          | 2.050   |         | Crippen Method  |
| mcvol         | 125.650 | ml/mol  | McGowan Method  |
| рс            | 4736.62 | kPa     | Joback Method   |
| tb            | 593.24  | K       | Joback Method   |
| tc            | 826.79  | K       | Joback Method   |
| tf            | 377.90  | К       | Vapour pressure data for<br>2-n-propylresorcinol,<br>4-ethylresorcinol and<br>4-hexylresorcinol near<br>their normal boiling points<br>measured by differential<br>scanning calorimetry |
| VC            | 0.363   | m3/kmol | Joback Method   |

## **Temperature Dependent Properties**

| Property code | Value  | Unit    | Temperature [K] | Source        |
|---------------|--------|---------|-----------------|---------------|
| cpg           | 314.64 | J/mol×K | 593.24          | Joback Method |
| cpg           | 325.87 | J/mol×K | 632.17          | Joback Method |
| cpg           | 336.27 | J/mol×K | 671.09          | Joback Method |
| cpg           | 345.97 | J/mol×K | 710.02          | Joback Method |
| cpg           | 355.11 | J/mol×K | 748.94          | Joback Method |
| cpg           | 363.83 | J/mol×K | 787.87          | Joback Method |

| cpg   | 372.27    | J/mol×K | 826.79 | Joback Method |
|-------|-----------|---------|--------|---------------|
| dvisc | 0.0002757 | Paxs    | 441.05 | Joback Method |
| dvisc | 0.0001281 | Paxs    | 466.42 | Joback Method |
| dvisc | 0.0000644 | Paxs    | 491.78 | Joback Method |
| dvisc | 0.0000346 | Paxs    | 517.14 | Joback Method |
| dvisc | 0.0000197 | Paxs    | 542.51 | Joback Method |
| dvisc | 0.0000118 | Paxs    | 567.88 | Joback Method |
| dvisc | 0.0000074 | Paxs    | 593.24 | Joback Method |

# **Pressure Dependent Properties**

| Property code | Value  | Unit | Pressure [kPa]    | Source   |
|---------------|--------|------|-------------------|--|
| tbp           | 470.60 | K    | 9.92              | Vapour pressure data for 2-n-propylresorcinol 4-ethylresorcinol and 4-hexylresorcinol near their normal boiling points measured by differential scanning calorimetry |
| tbp           | 491.40 | K    | 19.83<br><i>2</i> | Vapour pressure data for 2-n-propylresorcinol 4-ethylresorcinol and 4-hexylresorcinol near their normal boiling points measured by differential scanning calorimetry |
| tbp           | 504.70 | K    | 29.79             | Vapour pressure data for 2-n-propylresorcinol 4-ethylresorcinol and 4-hexylresorcinol near their normal boiling points measured by differential scanning calorimetry |

| tbp | 523.40 | K | 49.69  | Vapour pressure data for 2-n-propylresorcinol, 4-ethylresorcinol and 4-hexylresorcinol near their normal boiling points measured by differential scanning calorimetry |
|-----|--------|---|--------|---|
| tbp | 536.40 | K | 69.61  | Vapour pressure data for 2-n-propylresorcinol, 4-ethylresorcinol and 4-hexylresorcinol near their normal boiling points measured by differential scanning calorimetry |
| tbp | 551.10 | K | 98.91  | Vapour pressure data for 2-n-propylresorcinol, 4-ethylresorcinol and 4-hexylresorcinol near their normal boiling points measured by differential scanning calorimetry |
| tbp | 582.80 | K | 198.31 | Vapour pressure data for 2-n-propylresorcinol, 4-ethylresorcinol and 4-hexylresorcinol near their normal boiling points measured by differential scanning calorimetry |
| tbp | 605.40 | K | 299.37 | Vapour pressure data for 2-n-propylresorcinol, 4-ethylresorcinol and 4-hexylresorcinol near their normal boiling points measured by differential scanning calorimetry |

K 400.46 618.90 tbp Vapour pressure data for 2-n-propylresorcinol, 4-ethylresorcinol and 4-hexylresorcinol near their normal boiling points measured by differential scanning calorimetry

#### **Sources**

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.doi.org/10.1016/j.jct.2019.03.008

Vapour pressure data for 2-n-propylresorcinol, 4-ethylresorcinol and 4-hexylresorcinol near their normal boiling points measured by differential

scanning calorimetry:

### Legend

cpg: Ideal gas heat capacity

**dvisc:** Dynamic viscosity

gf: Standard Gibbs free energy of formationhf: Enthalpy of formation at standard conditionshfus: Enthalpy of fusion at standard conditions

**hvap:** Enthalpy of vaporization at standard conditions

log10ws: Log10 of Water solubility in mol/llogp: Octanol/Water partition coefficientmcvol: McGowan's characteristic volume

pc: Critical Pressure

tb: Normal Boiling Point Temperaturetbp: Boiling point at given pressure

tc: Critical Temperature

tf: Normal melting (fusion) point

vc: Critical Volume

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