

# yttrium

|                      |                             |
|----------------------|-----------------------------|
| Inchi:               | InChI=1S/Y                  |
| InchiKey:            | VWQVUPCCIRVNHF-UHFFFAOYSA-N |
| Formula:             | Y                           |
| SMILES:              | [Y]                         |
| Mol. weight [g/mol]: | 88.91                       |
| CAS:                 | 7440-65-5                   |

## Physical Properties

| Property code | Value       | Unit   | Source       |
|---------------|-------------|--------|--------------|
| affp          | 967.00      | kJ/mol | NIST Webbook |
| basg          | 945.90      | kJ/mol | NIST Webbook |
| ea            | 0.31 ± 0.01 | eV     | NIST Webbook |
| ie            | 6.40 ± 0.50 | eV     | NIST Webbook |
| ie            | 6.22        | eV     | NIST Webbook |
| ie            | 7.00 ± 0.50 | eV     | NIST Webbook |
| ie            | 6.35 ± 0.10 | eV     | NIST Webbook |
| ie            | 6.22        | eV     | NIST Webbook |
| ie            | 6.60 ± 0.60 | eV     | NIST Webbook |
| ie            | 6.50 ± 0.50 | eV     | NIST Webbook |
| ie            | 6.45 ± 0.15 | eV     | NIST Webbook |
| ie            | 6.90 ± 0.10 | eV     | NIST Webbook |
| ie            | 6.22        | eV     | NIST Webbook |
| ie            | 6.38        | eV     | NIST Webbook |

## Correlations

| Information                 | Value                         |
|-----------------------------|-------------------------------|
| Property code               | pvap                          |
| Equation                    | $\ln(P_{vp}) = A + B/(T + C)$ |
| Coeff. A                    | 1.64179e+01                   |
| Coeff. B                    | -4.14277e+04                  |
| Coeff. C                    | -1.07200e+02                  |
| Temperature range (K), min. | 1883.25                       |
| Temperature range (K), max. | 3618.15                       |

# Sources

Calorimetric study of enthalpies of mixing in liquid gallium germanium yttrium alloys:

<https://www.doi.org/10.1016/j.tca.2005.08.004>

The Yaws Handbook of Vapor Pressure:

<http://webbook.nist.gov/cgi/cbook.cgi?ID=C7440655&Units=SI>

<https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure>

## Legend

|              |                   |
|--------------|-------------------|
| <b>affp:</b> | Proton affinity   |
| <b>basg:</b> | Gas basicity      |
| <b>ea:</b>   | Electron affinity |
| <b>ie:</b>   | Ionization energy |
| <b>pvap:</b> | Vapor pressure    |

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