

# Samarium

|                      |                             |
|----------------------|-----------------------------|
| Inchi:               | InChI=1S/Sm                 |
| InchiKey:            | KZUNJOHGWZRPMI-UHFFFAOYSA-N |
| Formula:             | Sm                          |
| SMILES:              | [Sm]                        |
| Mol. weight [g/mol]: | 150.36                      |
| CAS:                 | 7440-19-9                   |

## Correlations

| Information                 | Value                         |
|-----------------------------|-------------------------------|
| Property code               | pvap                          |
| Equation                    | $\ln(P_{vp}) = A + B/(T + C)$ |
| Coeff. A                    | 1.34681e+01                   |
| Coeff. B                    | -1.66773e+04                  |
| Coeff. C                    | -1.82670e+02                  |
| Temperature range (K), min. | 973.15                        |
| Temperature range (K), max. | 2273.15                       |

## Sources

|                                                                                                                                                                                                                                             |                                                                                                                                                                                         |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Cheméo Relay (1.0, beta):                                                                                                                                                                                                                   |                                                                                                                                                                                         |
| Synthesis, structure, and thermodynamics of a lanthanide compound incorporating phosphonic acid: Investigation in the variation of Gibbs energy of formation of RE6UO12 (RE = La, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Yb, Lu) of the 4f series: | <a href="https://www.doi.org/10.1016/j.jct.2012.06.029">https://www.doi.org/10.1016/j.jct.2012.06.029</a>                                                                               |
| Thermodynamic stability of RNi2-Laves phases                                                                                                                                                                                                | <a href="https://www.doi.org/10.1016/j.jct.2013.05.044">https://www.doi.org/10.1016/j.jct.2013.05.044</a>                                                                               |
| Thermodynamic stability of RNi2-Laves phases                                                                                                                                                                                                | <a href="https://www.doi.org/10.1016/j.jct.2019.06.030">https://www.doi.org/10.1016/j.jct.2019.06.030</a>                                                                               |
| The Yaws Handbook of Vapor Pressure                                                                                                                                                                                                         | <a href="https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure">https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure</a> |
| NIST Webbook:                                                                                                                                                                                                                               | <a href="http://webbook.nist.gov/cgi/cbook.cgi?ID=C7440199&amp;Units=SI">http://webbook.nist.gov/cgi/cbook.cgi?ID=C7440199&amp;Units=SI</a>                                             |
| Cheméo Relay (1.0):                                                                                                                                                                                                                         |                                                                                                                                                                                         |

## Legend

pvap: Vapor pressure

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<https://www.chemeo.com/cid/33-436-1/Samarium.pdf>

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