

molybdenum

Inchi: InChI=1S/Mo
InchiKey: ZOKXTWBITQBERF-UHFFFAOYSA-N
Formula: Mo
SMILES: [Mo]
Mol. weight [g/mol]: 95.96
CAS: 7439-98-7

Physical Properties

| Property code | Value | Unit | Source |
|---------------|-------------|------|--------------|
| ea | 0.75 ± 0.00 | eV | NIST Webbook |
| ea | 0.75 ± 0.00 | eV | NIST Webbook |
| ea | 0.75 ± 0.00 | eV | NIST Webbook |
| ea | 0.75 ± 0.01 | eV | NIST Webbook |
| ie | 7.09 ± 0.00 | eV | NIST Webbook |
| ie | 7.09 | eV | NIST Webbook |
| ie | 7.09 ± 0.00 | eV | NIST Webbook |
| ie | 7.22 ± 0.06 | eV | NIST Webbook |
| ie | 7.00 ± 0.30 | eV | NIST Webbook |
| ie | 7.10 | eV | NIST Webbook |
| ie | 7.10 | eV | NIST Webbook |

Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---------------|-----------|------|-----------------|--|
| dvisc | 0.0040000 | Paxs | 3213.00 | Viscosity of molten Mo, Ta, Os, Re, and W measured by electrostatic levitation |
| dvisc | 0.0067000 | Paxs | 2573.00 | Viscosity of molten Mo, Ta, Os, Re, and W measured by electrostatic levitation |

| | | | | |
|-------|-----------|------|---------|--|
| dvisc | 0.0066000 | Paxs | 2600.00 | Viscosity of molten Mo, Ta, Os, Re, and W measured by electrostatic levitation |
| dvisc | 0.0062000 | Paxs | 2650.00 | Viscosity of molten Mo, Ta, Os, Re, and W measured by electrostatic levitation |
| dvisc | 0.0059000 | Paxs | 2700.00 | Viscosity of molten Mo, Ta, Os, Re, and W measured by electrostatic levitation |
| dvisc | 0.0057000 | Paxs | 2750.00 | Viscosity of molten Mo, Ta, Os, Re, and W measured by electrostatic levitation |
| dvisc | 0.0054000 | Paxs | 2800.00 | Viscosity of molten Mo, Ta, Os, Re, and W measured by electrostatic levitation |
| dvisc | 0.0052000 | Paxs | 2850.00 | Viscosity of molten Mo, Ta, Os, Re, and W measured by electrostatic levitation |
| dvisc | 0.0050000 | Paxs | 2896.00 | Viscosity of molten Mo, Ta, Os, Re, and W measured by electrostatic levitation |
| dvisc | 0.0050000 | Paxs | 2900.00 | Viscosity of molten Mo, Ta, Os, Re, and W measured by electrostatic levitation |
| dvisc | 0.0048000 | Paxs | 2950.00 | Viscosity of molten Mo, Ta, Os, Re, and W measured by electrostatic levitation |
| dvisc | 0.0046000 | Paxs | 3000.00 | Viscosity of molten Mo, Ta, Os, Re, and W measured by electrostatic levitation |

| | | | | |
|-------|-----------|-------|---------|--|
| dvisc | 0.0045000 | Paxs | 3050.00 | Viscosity of molten Mo, Ta, Os, Re, and W measured by electrostatic levitation |
| dvisc | 0.0043000 | Paxs | 3100.00 | Viscosity of molten Mo, Ta, Os, Re, and W measured by electrostatic levitation |
| dvisc | 0.0042000 | Paxs | 3150.00 | Viscosity of molten Mo, Ta, Os, Re, and W measured by electrostatic levitation |
| rhos | 9999.00 | kg/m3 | 298.00 | Investigation of thermophysical properties of thin-layered paint |

Correlations

| Information | Value |
|-----------------------------|-------------------------------|
| Property code | pvap |
| Equation | $\ln(P_{vp}) = A + B/(T + C)$ |
| Coeff. A | 1.79009e+01 |
| Coeff. B | -6.20389e+04 |
| Coeff. C | -2.41470e+02 |
| Temperature range (K), min. | 2673.15 |
| Temperature range (K), max. | 5223.15 |

Sources

Investigation of thermophysical properties of thin-layered paint: NIST Webbook:

<https://www.doi.org/10.1016/j.tca.2018.01.022>

<http://webbook.nist.gov/cgi/cbook.cgi?ID=C7439987&Units=SI>

Viscosity of molten Mo, Ta, Os, Re, and W measured by electrostatic levitation: Thermodynamic study of

<https://www.doi.org/10.1016/j.jct.2013.05.036>

<https://www.doi.org/10.1016/j.jct.2018.01.016>

$\text{Cs}_3\text{Na}(\text{MoO}_4)_2$: Determination of the standard enthalpy of formation and pressure entropy at 298.15 K:

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

A calorimetric and thermodynamic investigation of $\text{A}_2[(\text{UO}_2)_2(\text{MoO}_4)_2]$

<https://www.doi.org/10.1016/j.jct.2015.06.028>

thermodynamic properties and behavior of $\text{A}_2[(\text{UO}_2)_2(\text{MoO}_4)_2]$

<https://www.doi.org/10.1016/j.jct.2014.07.009>

system: NIST-JCPDS 14-01120, and properties of $\text{Bi}_2\text{Mo}_3\text{O}_{12}$ (s), Bi_2MoO_6 (s) and $\text{Bi}_6\text{Mo}_2\text{O}_{15}$ (s):

<https://www.doi.org/10.1016/j.jct.2019.105886>

Legend

| | |
|---------------|-------------------|
| dvisc: | Dynamic viscosity |
| ea: | Electron affinity |
| ie: | Ionization energy |
| pvap: | Vapor pressure |
| rhos: | Solid Density |

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