

# 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	0.0067000	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
dvisc	0.0040000	Paxs	3213.00	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

Thermodynamic properties and behaviour of A2[(UO2)(MoO4)2] compounds with A = Li, Na, K, Rb, and Cs

Na(MoO4)2: Determination of the standard enthalpy of formation and standard entropy at 298.15 K: The Yaws Handbook of Vapor Pressure: Viscosity of molten Mo, Ta, Os, Re, and W measured by electrostatic levitation: Investigation of thermophysical properties of thin-layered paint: Determination of thermodynamic properties of Bi2Mo3O12 (s), Bi2MoO6 (s) and Bi2Mo2O7 (s) by the standard enthalpy of formation investigation of A2[(UO2)2(MoO4)O2] compounds with A = K and Rb and calculated phase relations in the system (K2MoO4 + UO3 + H2O):

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

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

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

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

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

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

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

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

## Legend

<b>dvisc:</b>	Dynamic viscosity
<b>ea:</b>	Electron affinity
<b>ie:</b>	Ionization energy
<b>pvap:</b>	Vapor pressure
<b>rhos:</b>	Solid Density

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