

# osmium

**Inchi:** InChI=1S/Os  
**InchiKey:** SYQBFIAQQZEGI-UHFFFAOYSA-N  
**Formula:** Os  
**SMILES:** [Os]  
**Mol. weight [g/mol]:** 190.23  
**CAS:** 7440-04-2

## Physical Properties

Property code	Value	Unit	Source
ea	1.08 ± 0.00	eV	NIST Webbook
ie	8.70	eV	NIST Webbook
ie	8.70	eV	NIST Webbook
ie	8.15 ± 0.09	eV	NIST Webbook
ie	8.70	eV	NIST Webbook

## Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
dvisc	0.0074000	Paxs	3265.00	Viscosity of molten Mo, Ta, Os, Re, and W measured by electrostatic levitation
dvisc	0.0072000	Paxs	3290.00	Viscosity of molten Mo, Ta, Os, Re, and W measured by electrostatic levitation
dvisc	0.0070000	Paxs	3306.00	Viscosity of molten Mo, Ta, Os, Re, and W measured by electrostatic levitation

dvisc	0.0070000	Paxs	3315.00	Viscosity of molten Mo, Ta, Os, Re, and W measured by electrostatic levitation
dvisc	0.0067000	Paxs	3340.00	Viscosity of molten Mo, Ta, Os, Re, and W measured by electrostatic levitation
dvisc	0.0065000	Paxs	3365.00	Viscosity of molten Mo, Ta, Os, Re, and W measured by electrostatic levitation
dvisc	0.0063000	Paxs	3390.00	Viscosity of molten Mo, Ta, Os, Re, and W measured by electrostatic levitation
dvisc	0.0061000	Paxs	3415.00	Viscosity of molten Mo, Ta, Os, Re, and W measured by electrostatic levitation
dvisc	0.0060000	Paxs	3440.00	Viscosity of molten Mo, Ta, Os, Re, and W measured by electrostatic levitation
dvisc	0.0058000	Paxs	3465.00	Viscosity of molten Mo, Ta, Os, Re, and W measured by electrostatic levitation
dvisc	0.0056000	Paxs	3490.00	Viscosity of molten Mo, Ta, Os, Re, and W measured by electrostatic levitation
dvisc	0.0055000	Paxs	3515.00	Viscosity of molten Mo, Ta, Os, Re, and W measured by electrostatic levitation
dvisc	0.0053000	Paxs	3542.00	Viscosity of molten Mo, Ta, Os, Re, and W measured by electrostatic levitation

# Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
Coeff. A	2.04708e+01
Coeff. B	-8.00173e+04
Coeff. C	-2.37540e+02
Temperature range (K), min.	2873.15
Temperature range (K), max.	5673.15

## Sources

Viscosity of molten Mo, Ta, Os, Re, and W measured by electrostatic levitation: <https://www.doi.org/10.1016/j.jct.2013.05.036>

NIST Webbook: <http://webbook.nist.gov/cgi/cbook.cgi?ID=C7440042&Units=SI>

The Yaws Handbook of Vapor Pressure: <https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure>

## Legend

**dvisc:** Dynamic viscosity

**ea:** Electron affinity

**ie:** Ionization energy

**pvap:** Vapor pressure

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