rhenium

Inchi: InChI=1S/Re
InchiKey: WUAPFZMCVAUBPE-UHFFFAOYSA-N
Formula: Re
SMILES: [Re]
Mol. weight [g/mol]: 186.21
CAS: 7440-15-5

Physical Properties

Property code	Value	Unit	Source
ie	7.88	eV	NIST Webbook
ie	7.88	eV	NIST Webbook
ie	7.76 ± 0.03	eV	NIST Webbook
ie	7.88	eV	NIST Webbook

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
dvisc	0.0149000	Pa×s	3034.00	Viscosity of molten Mo, Ta, Os, Re, and W measured by electrostatic levitation
dvisc	0.0146000	Pa×s	3050.00	Viscosity of molten Mo, Ta, Os, Re, and W measured by electrostatic levitation
dvisc	0.0139000	Pa×s	3100.00	Viscosity of molten Mo, Ta, Os, Re, and W measured by electrostatic levitation
dvisc	0.0132000	Pa×s	3150.00	Viscosity of molten Mo, Ta, Os, Re, and W measured by electrostatic levitation

dvisc	0.0125000	Pa×s	3200.00	Viscosity of molten Mo, Ta, Os, Re, and W measured by electrostatic levitation
dvisc	0.0120000	Pa×s	3250.00	Viscosity of molten Mo, Ta, Os, Re, and W measured by electrostatic levitation
dvisc	0.0114000	Pa×s	3300.00	Viscosity of molten Mo, Ta, Os, Re, and W measured by electrostatic levitation
dvisc	0.0109000	Pa×s	3350.00	Viscosity of molten Mo, Ta, Os, Re, and W measured by electrostatic levitation
dvisc	0.0104000	Pa×s	3400.00	Viscosity of molten Mo, Ta, Os, Re, and W measured by electrostatic levitation
dvisc	0.0100000	Pa×s	3450.00	Viscosity of molten Mo, Ta, Os, Re, and W measured by electrostatic levitation
dvisc	0.0099000	Pa×s	3459.00	Viscosity of molten Mo, Ta, Os, Re, and W measured by electrostatic levitation
dvisc	0.0096000	Pa×s	3500.00	Viscosity of molten Mo, Ta, Os, Re, and W measured by electrostatic levitation
dvisc	0.0092000	Pa×s	3550.00	Viscosity of molten Mo, Ta, Os, Re, and W measured by electrostatic levitation
dvisc	0.0088000	Pa×s	3600.00	Viscosity of molten Mo, Ta, Os, Re, and W measured by electrostatic levitation

dvisc	0.0085000	Pa×s	3650.00	Viscosity of molten Mo, Ta, Os, Re, and W measured by electrostatic levitation
dvisc	0.0084000	Pa×s	3675.00	Viscosity of molten Mo, Ta, Os, Re, and W measured by electrostatic levitation

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.86540e+01
Coeff. B	-8.02185e+04
Coeff. C	-1.53810e+02
Temperature range (K), min.	3303.15
Temperature range (K), max.	5954.15

Sources

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C7440155&Units=SI

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

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

Legend

dvisc: Dynamic viscosity

ie: Ionization energy

pvap: Vapor pressure

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https://www.chemeo.com/cid/33-719-7/rhenium.pdf