

Technical Data Sheet

RUTHENIUM 99.90%

Principal uses	Electronics
	Electrochemical
	Chemical

Physical data	Crystal structure	Close-packed hexagonal	
	Atomic number	44	
	Atomic weight	101.07	
	Density (20°C)	12.45	g/cm ³
	Melting point	2334	°C
	Boiling point	4150	°C
	Specific heat (25°C)	0.238	J/(g.K)
	Linear thermal expansion coefficient (25°C)	6.4 x 10 ⁻⁶	K ⁻¹
	Thermal conductivity (25°C)	1.17	W/(cm.K)

Grade & Typical Analysis	Element	Min. [%]	Method
		Ru	99.9
	Element	Max. [ppm]	Method
	Ag	200	B
	Au	200	B
	Ir	200	B
	Os	200	B
	Pd	200	B
	Pt	200	B
	Rh	200	B
	Al	200	B
	As	200	B
	B	200	B
	Bi	200	B
	Ca	200	B
	Cd	200	B
	Co	200	B
	Cr	200	B
	Cu	200	B
	Fe	200	B
	Mg	200	B
	Mn	200	B
	Mo	200	B

Umicore Precious Metals Refining
Commercial department

A. Greinerstraat 14
B - 2660 Hoboken
BELGIUM

Tel +32-3 821 74 80
Fax +32-3 821 78 07

e-mail: preciousmetals@umicore.com
website: www.preciousmetals.umicore.com
Version Ru/200712

Ni	200	B
Pb	200	B
Sb	200	B
Se	200	B
Si	200	B
Sn	200	B
Te	200	B
Ti	200	B
V	200	B
Zn	200	B
Zr	200	B
Total impurities	1000	
BORL	0.10 %	C

Methods

A	by difference
B	ICP-OES
C	gravimetric

Remarks

all positions based on product

Shapes powder

Packing 5000 ml HD-PE bottle (High Density Polyethylene)
dimensions: 142 x 142 x 311 mm
opening width: 84 mm
weight: 210 gr

Umicore Precious Metals Refining
Commercial department

A. Greinerstraat 14
B - 2660 Hoboken
BELGIUM

Tel +32-3 821 74 80
Fax +32-3 821 78 07

e-mail: preciousmetals@umicore.com
website: www.preciousmetals.umicore.com
Version Ru/200712