

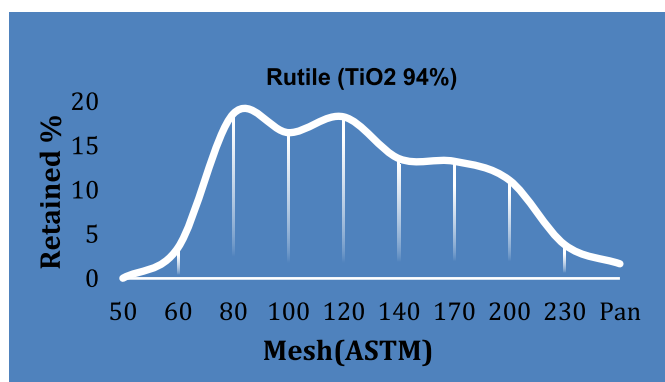


ARIMA MINERALS

PREMIUM RUTILE 94% TiO₂



PARTICLE SIZE ¹			
Mesh	MM	Guaranteed %	Retained %
50	0.300	<1	0.02
60	0.250	0 ~ 8	3.49
80	0.180	10 ~ 25	18.41
100	0.150	10 ~ 25	16.48
120	0.125	10 ~ 25	18.26
140	0.106	10 ~ 25	13.54
170	0.090	10 ~ 20	13.24
200	0.075	5~ 18	11.10
230	0.063	0 ~ 7	3.81
Pan		<5	1.65



MINERALOGICAL REPORT ⁵		
Minerals	Guaranteed %	Typical %
Rutile	97.50 Min	98.05
Zircon	2.00 Max	1.59
Leucosene	0.50 Max	0.16
Others	0.50 Max	0.20

CHEMICAL CONTENT ²		
Elements	Guaranteed %	Typical %
TiO ₂	94.00 Min	95.07
Fe ₂ O ₃	0.500 Max	0.320
SiO ₂	1.200 Max	1.015
ZrO ₂ + HfO ₂	1.800 Max	1.564
Al ₂ O ₃	0.300 Max	0.224
V ₂ O ₅	0.800 Max	0.709
P*	0.026 Max	0.020
P ₂ O ₅	0.060 Max	0.050
S*	0.008 Max	0.004
SO ₃	0.020 Max	0.008
Nb ₂ O ₅	0.250 Max	0.152
U (ppm)	100 Max	44
Th (ppm)	75 Max	20

PHYSICAL PARAMETERS		
Parameters	Guaranteed	Typical
LOI @ 1000°C ⁶	0.50 % Max	0.18%
H ₂ O @ 110°C ⁷	0.50 % Max	0.14%
Radioactivity	700 Bq/kg Max	626 Bq/kg
Specific gravity	4.2 ~ 4.5	4.3
Bulk Density	2.5 to 2.7 t/m ³	2.53 t/m ³
Colour	Brown/Black	Black
Structure	Tetragonal	Tetragonal
Hardness	6 to 6.5 mohs scale	6.5 mohs scale

- Particle Size determined by the method of ASTM C136.
- Chemical assay tested by X Ray Florescence Spectrometry (Epsilon 1 / Axios Max). Instrument calibrated with standard samples and tested by Bureau Veritas.
- *Element Phosphorus (P) calculated from the Compound P₂O₅ by its molecular mass.
- *Element Sulphur (S) calculated from the Compound SO by its molecular mass
- Mineral purity determined by Grain counting.
- Loss on ignition (LOI @1000°C) determined gravimetrically.
- Moisture content (H₂O) determined by the method of ASTM C566/ISO 11127-5.
- This material is naturally occurring and some variations in grain size and/or chemical analyses can be expected. Other guarantees for specific elements are subject to discussion for individual contracts