

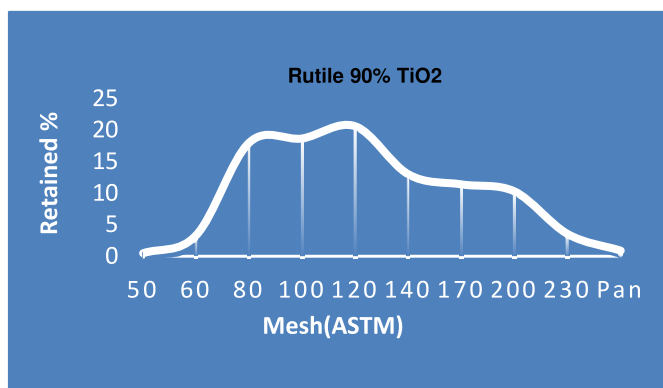


ARIMA MINERALS

RUTILE 90% TiO₂



PARTICLE SIZE ¹			
Mesh	MM	Guaranteed%	Retained %
50	0.300	< 1	0.48
60	0.250	0 ~ 8	3.28
80	0.180	10 ~ 25	18.02
100	0.150	10 ~ 30	18.68
120	0.125	15 ~ 25	20.62
140	0.106	5 ~ 20	12.96
170	0.090	5 ~ 20	11.36
200	0.075	5 ~ 15	10.26
230	0.063	0 ~ 5	3.50
Pan		< 3	0.84



MINERALOGICAL REPORT ⁵		
Minerals	Guaranteed %	Typical %
Titanium Bearing Minerals	97.00 Min	97.77
Zircon	2.50 Max	1.98
Others	0.50 Max	0.25

CHEMICAL CONTENT ²		
Elements	Guaranteed %	Typical %
TiO ₂	90.00 Min	90.69
Fe ₂ O ₃	4.00 Max	3.451
SiO ₂	1.50 Max	1.329
ZrO ₂ + HfO ₂	2.00 Max	1.831
Al ₂ O ₃	0.80 Max	0.681
V ₂ O ₅	0.80 Max	0.661
P*	0.050 Max	0.031
P ₂ O ₅	0.100 Max	0.068
S*	0.020 Max	0.014
SO ₃	0.040 Max	0.034
Nb ₂ O ₅	0.300 Max	0.169
U (ppm)	100 Max	44
Th (ppm)	200 Max	160

PHYSICAL PARAMETERS		
Parameters	Guaranteed	Typical
LOI @ 1000°C ⁶	0.50 % Max	0.42 %
H ₂ O @ 110°C ⁷	0.50 % Max	0.15 %
Radioactivity	1200 Bq/kg Max	939 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.