

### Manufacturing

TiAl RNT650 Ingots are manufactured by single, double or triple VAR melting with consumable electrodes. Consumable electrodes are made up of compacted Ti sponge, Aluminium and master alloys.

### Applications

RNT650 Ingots are used as feed stock materials for further casting processes to  $\gamma$ -TiAl components.

### Chemical Composition

Ti -33.5Al -4.8Nb -1Cr -0.2Si (wt.-%)

Impurities (wt.-ppm)

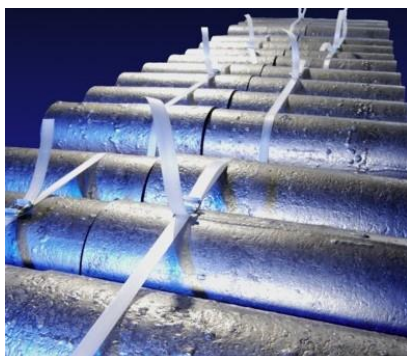
H	N	O	C	Fe	Ni
< 50	< 200	< 800	< 200	< 1000	< 500

### Forms of Delivery

Cylindrical ingots of 140 mm – 280 mm diameter and up to 1.200 mm length.

Surface conditions as-cast or mechanically machined.

Other sizes and individual customer specifications on request.



### Physical Properties

Density:	3.95 g/cm <sup>3</sup>
Hardness:	285 HV10
Youngs Modulus (RT):	155 GPa
(800 °C):	102 GPa

Microstructure consists of:

- $\alpha_2/\gamma$  lamellar colonies
- globular  $\gamma$ -TiAl grains
- globular  $\alpha_2$ -Ti<sub>3</sub>Al grains

T<sub>melt</sub>: ca. 1605 °C

#### AMG TITANIUM ALLOYS & COATINGS

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