

TANTALUM CRUCIBLES & BOATS

The leading anti-corrosion character, Strength at high temperature, outstanding physical mechanical properties of tantalum is ideally suited for reboiling, preheating and condensing of nitric acid, hydrochloric acid, bromic acid, sulphuric acid and combinations of these acids with any other chemicals like aqua regia. TAF's tantalum equipments are to be made from electron beam melted high purity rod, sheet and tubings.

Because of its high melting point of 5432°F, tantalum has been widely used in the Electronics, Nuclear, Aerospace and chemical industries and in such areas as crucibles, boats, heat shields, and others components for vacuum furnace, where heat must be transferred to or from acids and other corrosive fluids and vapours.

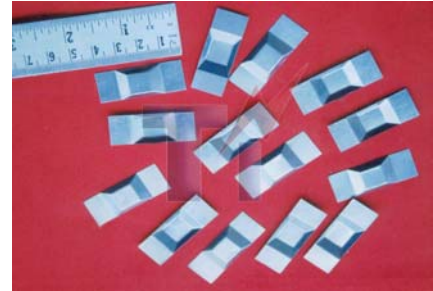
Tantalum Exhibits excellent resistance to most acids, especially hydrochloric, sulfuric, nitric and aqua regia at normal temperature and is also completely resistance to attack by many molten metals, including sodium, lithium, magnesium, potassium and mercury in temperatures up to 1100°C (2000°F)

| Standard Dimensions of crucibles | | | | | |
|----------------------------------|---------------|------------|-------|--------------------|-------|
| Capacity (ML) | Low Form (mm) | | | Straight Wall (mm) | |
| | Top Dia | Bottom Dia | Depth | Outer Dia | Depth |
| 5 | | | | 21 | 19 |
| 10 | | | | 27 | 22 |
| 15 | 36 | 32 | 23 | 33 | 22 |
| 20 | 36 | 32 | 32 | 33 | 23 |
| 25 | 47 | 40 | 23 | 47 | 22 |
| 35 | 47 | 40 | 35 | 47 | 34 |
| 45 | 47 | 40 | 42 | 47 | 41 |
| 55 | 47 | 40 | 42 | 47 | 41 |
| 75 | 51 | 44 | 42 | 47 | 41 |
| 100 | 59 | 53 | 46 | 59 | 45 |
| 250 | 83 | 72 | 60 | 83 | 57 |
| 500 | 102 | 89 | 66 | 104 | 63 |
| 1000 | 152 | 144 | 95 | 127 | 89 |
| 1500 | 152 | 144 | 108 | 152 | 108 |

Above sizes & capacities are approximate
 Std. Thk. 5 to 100ml. : 0.5mm
 Std. Thk 250 to 1500ml. : 0.8mm

Tantalum crucibles are standard or special shaped size as per customer's design. However, they are to be made by the process of precious deep draw forming spinning, punch press, forging, CNC precision turning & milling, Welding and fabrication from commercially pure tantalum confirming to ANSI / ASTM B708 and 365, Gr R05200.

for...
**HCL, Br,
 H₂So₄, NaCl,
 KOH,Cl₂, HF, NaOH,
 Hno₃, Fatty Acid,
 Lab Applications & Many**



Tantalum Boat



Tantalum Crucibles

Corrosion resistance of Tantalum

With Molten Metals

| | |
|--------------------------|-------------|
| Sodium | Upto 1200°C |
| Magnesium | Upto 1150°C |
| Lithium, Potassium, Lead | Upto 1000°C |
| Bismuth | Upto 900°C |
| Mercury | Upto 600°C |
| Zinc | Upto 500°C |
| Gallium | Upto 450°C |

With Refractory Oxides

| | |
|----------|-------------|
| Alumina | Upto 1900°C |
| Berylia | Upto 1600°C |
| Magnesia | Upto 1800°C |
| Zirconia | Upto 1600°C |
| Thoria | Upto 1900°C |