

ULTRA-PURE (99.99) TIN PRODUCTS...

for Specialized Alloying, Electroplating & Chemical Applications

NATHAN TROTTER ULTRA-PURE TIN



GENERAL DESCRIPTION

Nathan Trotter & Company, Inc. specializes in the production of Ultra-Pure Tin Products for specific applications where higher grades (99.99%) of tin are required. NT Ultra-Pure Tin Products are engineered and manufactured using 99.99 high purity tin ingot that has been refined to the highest standards available in the world. NT Ultra-Pure is used in specialty applications where standard tin grades will not suffice. NT Ultra-Pure has extremely low levels of lead, cadmium, antimony & copper. All shipments are accompanied with a certificate of analysis from our state-of-the-art laboratory. We welcome the opportunity to discuss your pure tin and high purity tin applications.

QUALITY ASSURANCE

Consistent purity levels and strict adherence to our customer's product specifications are among our top priorities. We have our own in-house analytical capability and provide a certificate of analysis with each one of our shipments. Nathan Trotter has been ISO 9001:2008 registered since 1997.

LEAD TIME & DELIVERY

Lead time for most tin orders is approximately one week. To meet the needs of smaller customers and accommodate rush orders, we maintain an inventory of standard products which can be packaged to order and promptly shipped.

NT ULTRA-PURE TIN CAPABILITIES

- Cast bars- 1/4 lb. sticks to 5 lb. bars
- Ingots- 5 lb. bars to 50 lb. ingots
- Pigs- 55 lb.
- Extruded Anodes- Stars, Ovals, Bars, Rods, Balls, Chunks
- Cast Anodes- Bars, D Shaped, Waffles, Chunks
- Flat-Tops- 1 5/8"
- Balls- 1/2", 3/4", 7/8", 1", 1 5/8" & 2"
- Chunks/Nuggets- 3/4" & 1"
- Slugs/Bullets- 1/4" & 1/2"
- Shot- 1/8" x down
- Mossy Flakes- 1" x down

Custom anodes are also fabricated according to specification

COMPARATIVE ANALYSIS OF TIN GRADES

ELEMENT	GRADE A TIN INGOT	LOW LEAD TIN INGOT	NT ULTRA-PURE TIN INGOT
Tin- Sn	99.952	99.966	99.991
Lead- Pb	<0.0143	<0.0032	<0.0031
Antimony- Sb	<0.0195	<0.0192	<0.0015
Copper- Cu	<0.0042	<0.0008	<0.0002
Zinc- Zn	<0.0004	<0.0004	<0.0001
Iron- Fe	<0.0011	<0.0027	<0.0009
Aluminum- Al	<0.0004	<0.0004	<0.0001
Arsenic- As	<0.0009	<0.0009	<0.0001
Cadmium- Cd	<0.0002	<0.0002	<0.0001
Bismuth- Bi	<0.0019	<0.0015	<0.0021
Silver- Ag	<0.0002	<0.0001	<0.00001
Nickel- Ni	<0.0001	<0.0002	<0.00001
Sulfur- S	<0.0001	<0.0001	<0.00001

*** The above table is an illustration of actual tin lots received for purposes of comparison only

PHYSICAL PROPERTIES NT ULTRA-PURE TIN

PHYSICAL PROPERTIES	ASTM B339-00 GRADE A TIN INGOT
Melting Temperature	450°F 232 °C
Boiling Point	4118°F 2270 °C
Weight (lbs/in ³)	0.264 lbs/in ³
Density	7.30
Coefficient of Linear Expansion	0.000013 per °F at room temperature
Tensile Strength	0.94 tons/in ²

PACKAGING

- 50 lb. corrugated boxes
- 50 lb. pails, 100 lb. pails, 250 lb. pails (fiber, plastic or metal)
- Palletized, Banded & Shrink-Wrapped

NT CAN RECYCLE YOUR TIN SCRAP

Nathan Trotter can buy-back scrap which enables our customers to sell back any tin scrap and dross material. We offer our customers fair and reasonable market values in addition to prompt settlements or credits.

NATHAN TROTTER IS ISO 9001 : 2008 REGISTERED



Nathan Trotter & Co.
Non-Ferrous Metals

241 West Stewart Huston Drive • Coatesville, PA. 19320
Tel#: (215) 821-8461 • Fax#: (215) 701-0807 • www.nathantrrotter.com

For quotes, orders or technical assistance call (215) 821-8461
Daryl Williams
daryl@nathantrrotter.com