



PRODUCT DATA SHEET

TIN (Sn) STAR ANODE



CHEMICAL SPECIFICATION in accordance with ASTM B339

Element	Grade A Tin%	Low-Lead Tin%	99.99 Tin
Tin (Sn)	99.85 min	99.90 min	99.99 min
Silver (Ag)	0.01	0.01	0.002
Cadmium (Cd)	0.001	0.001	0.002
Lead (Pb)	0.05	0.005	0.005
Copper (Cu)	0.04	0.04	0.002
Arsenic (As)	0.05	0.05	0.002
Iron (Fe)	0.01	0.01	0.002
Zinc (Zn)	0.005	0.005	0.002
Nickel (Ni)	0.005	0.005	0.002
Antimony (Sb)	0.04	0.04	0.005
Bismuth (Bi)	0.03	0.03	0.002
Cobalt (Co)	0.005	0.005	0.002

Limits are % max unless otherwise shown as range or stated otherwise..

PHYSICAL PROPERTIES

Melting Temp (°F).....	450
Melting Temp (°C)	232
Density (lbs/in ³)	0.264
Specific Gravity (g/m ³)	7.30
Tensile Strength (tons./in. ²)	0.94
Brinell Hardness.....	4.6

TIN ANODES SUPPLIED BY NATHAN TROTTER

Below is a list of tin anodes manufactured by Nathan Trotter:

Tin Anodes for Plating	Type	Packaging
1x4, 1x3	Extruded	Strapped securely on pallet
Ovals	Extruded	Strapped securely on pallet
D-Shapes	Cast or Extruded	Strapped securely on pallet
Stars: 10 pt, 12 pt, 16 pt	Extruded	Strapped securely on pallet
Waffles	Extruded	Strapped securely on pallet
Balls; 1/2", 3/4", 7/8", 1", 1 3/4", 2"	Extruded/Cold-headed	50 lb box. 50 lb pail, 100 lb pail, 500/1000/2000 drum/crate/supersack
Nuggets 1/2", 3/4", 1",	Extruded	50 lb box. 50 lb pail, 100 lb pail, 500/1000/2000 drum/crate/supersack

APPLICATION

Nathan Trotter manufactured anodes performs favorably in reel-to-reel, rack, and barrel plating lines. Nathan Trotter hanging anodes and basket anodes are the industry leader in plating performance, consistency, and efficiency.

For Sales or Technical Assistance, contact Nathan Trotter & Co:

Info@nathantrötter.com or 610-524-1440

NATHAN TROTTER & Co. Inc.
241 West Stewart Huston Drive • Coatesville, PA. 19320

NATHAN TROTTER IS ISO 9001:2008 REGISTERED



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TIN (Sn) ANODES

OTHER TYPES OF ANODES SUPPLIED BY NATHAN TROTTER

Nathan Trotter manufactures or distributes other anodes to compliment its core business of tin anodes. Other anodes supplied include:

Other Types of Anodes	Size/Description	Packaging
Nickel	Inco S Rounds Xstrata D Crowns Inco S Pellet Inco R Round Nickel 1x1	50 lb box, 551 lb drum, 2204 lb crate
Phos Copper (Acid)	15 mm Ball 3/4" Ball 1" Ball 2" Ball 3/8 x 1/2" Nugget	50 lb box, 551 lb drum, 2204 lb crate
Oxygen-Free Copper	3/4" Ball 1" Ball 2" Ball 3/4" Nugget 1" Nugget	50 lb box, 551 lb drum, 2204 lb crate
Zinc	2" Ball 1x4xLength	250 lb Drum. Strapped on pallet
Cadmium Balls	2" Ball	50 lb Pail, 100 lb Pail, 500 lb Drum, 2000 lb Drum
Tin/Lead Solder	See Tin Anode sizing	See Tin Anode packaging

RECYCLING / RECLAIM

Tin Technology and Refining (www.tintech.com) is the recycling/reclaim division of Nathan Trotter. Tin Tech works in conjunction with Nathan Trotter solder bar customers to recycle spent anodes, plating residues, non-F006 sludges, and other plating scrap that is generated from the use of tin anodes. Tin Tech operates as a permitted, environmentally responsible smelter with full reduction capabilities enabling optimal recoveries for all types of plating scrap material.

STORAGE, HANDLING, SHELF LIFE

Nathan Trotter Anodes has an indefinite shelf life when stored in a dry, non-corrosive environment. Bars and packages should always be handled with care as material is naturally heavy.

HEALTH AND SAFETY

This product, during handling or use, may be hazardous to your health. Read the Safety Data Sheet (SDS) and warning label prior to use. SDS can be downloaded from our home page www.nathantrrotter.com

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