



# ZINC INDUSTRIAS NACIONALES S.A.

## LEAD ALLOYS TECHNICAL SPECIFICATIONS

Description Solid ingots  
CAS No. -



Specifications (% by weight)

Element	Refined Lead		Pure Lead		Pure Lead <Ag		Antimonial Lead 1% (1)		Antimonial Lead 2% (1)		Antimonial Lead 2.75%		Antimonial Lead 3% (1)		Antimonial Lead 3.35%		Antimonial Lead 8%		Lead Alloy (SbSe)		Lead Alloy 1/2 C		Antimonial Lead 1.5% (AF)		Antimonial Lead 2.7% (AF)	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
Antimony - Sb	-	0.003	-	0.001	-	5E-04	0.5	1	1.9	2.1	2.65	2.85	2.9	3.1	3.2	3.5	7.5	8.5	1.7	1.9	-	0.005	1.45	1.55	2.5	2.8
Arsenic - As	-	0.002	-	0.001	-	5E-04	-	0.005	-	0.05	0.18	0.22	-	0.05	0.1	0.2	-	0.3	0.09	0.13	-	0.005	0.1	0.3	0.1	0.16
Tin - Sn	-	0.002	-	0.001	-	5E-04	-	0.005	-	0.005	0.2	0.25	-	0.005	0.15	0.25	4.5	5.5	0.05	0.1	0.18	0.22	0.1	0.3	-	-
Copper - Cu	-	0.003	-	0.001	-	5E-04	-	0.003	-	0.003	-	0.02	-	0.003	0.02	0.05	-	0.01	-	0.005	-	0.06	-	-	-	-
Iron - Fe	-	0.002	-	0.001	-	5E-04	-	0.002	-	0.005	-	0.005	-	0.005	-	0.005	-	0.005	-	-	-	0.002	-	-	-	-
Bismuth - Bi	-	0.02	-	0.02	-	0.013	-	0.15	-	0.05	-	0.05	-	0.05	-	0.05	-	0.05	-	0.03	-	0.06	-	-	-	-
Silver - Ag	-	0.005	-	0.005	-	8E-04	-	0.01	-	0.005	-	0.005	-	0.005	-	-	-	0.01	-	0.005	-	0.005	-	-	-	-
Selenium - Se	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.02	0.03	-	-	0.05	0.06	-	-
Zinc - Zn	-	0.002	-	0.001	-	-	-	0.002	-	0.005	-	0.005	-	0.005	-	0.002	-	0.005	-	-	-	0.002	-	-	-	-
Manganese - Mn	-	1E-04	-	1E-04	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.001	-	-	-	-
Nickel - Ni	-	0.001	-	2E-04	-	2E-04	-	0.002	-	0.005	-	0.002	-	0.005	-	0.002	-	0.005	-	0.002	-	0.005	-	-	-	-
Cobalt - Co	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.005	-	-	-	-	-	-	0.001	-	-	-	-
Cadmium - Cd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.06	0.09	-	-	-	-
Sulfur - S	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.002	-	-	-	-	0.005	-	-	-	-	-	-
Tellurium - Te	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.002	-	0.005	-	-	-	-	-
Lead - Pb	99.96	-	99.97	-	99.99	-	Balance	Balance	Balance	Balance	Balance	Balance	Balance	Balance	Balance	Balance	Balance	Balance	Balance	Balance	Balance	Balance	Balance	Balance	Balance	Balance

Presentation Ingots of approximately 20 kg. In bundles of 1,000 kg.

Packing: Store lead in a dry, covered place, away from acids, bases, and oxidizing or reducing materials.