

# Data Sheet On Solder Ball

IDENTITY SPARKLE BALL S S-2062	No. 960471	Revision A
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## Section I

Manufacturer's Name Senju Metal Industry Co., Ltd.	
Address 23, Senju-Hasido-cho, Adachi-ku.	Telephone Number for Information 03(3888)5152
Tokyo, JAPAN 120	Data Prepared 18. OCT, 1996
	Signature of Preparer <i>S. Taniguchi</i>

## Section II - Hazardous Ingredients/Identity Information

Hazardous Components	CAS No.	OSHA PEL	ACGIH TLV	%
Tin	7440-31-5 *Current OSHA standard, and ACGIH(1980) Intended changes List for tin, tin oxide, and inorganic compounds (except SnH <sub>4</sub> ), as Sn. STEL is for 4 mg/m <sup>3</sup>	2mg/m <sup>3</sup>	2mg/m <sup>3</sup>	62.0
Lead	7439-92-1 *Current OSHA PEL(as Pb) with an action level of 0.03mg/m <sup>3</sup> (29 CFR 1910.1025)	0.05mg/m <sup>3</sup>	0.05mg/m <sup>3</sup>	36.0
Silver	7440-22-4	0.01mg/m <sup>3</sup>	0.1mg/m <sup>3</sup>	2.0

## Section III - Physical/Chemical Characteristics

Boiling Point (Pb)	1540°C	Specific Gravity (H <sub>2</sub> O=1)	8.4
Vapor Pressure (mm Hg)	NA	Melting Point (°C) ALLOYS	179~190
Vapor Density (AIR=1)	NA	Evaporation Rate (Butyl Acetate=1)	NA

Solubility in Water: Insoluble

Appearance and Odor: Silver-Gray Color no Smell

## Section IV - Fire and Explosion Hazard Data

Flash Point (Solvent used in this flux) C.O.C °C	Flammable Limits	LEL	UEL
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Extinguishing Media: Carbon dioxide and/or dry chemical

Special Fire Fighting Procedures: Use self-contained breathing apparatus and full protective clothing for fires in enclosed areas.

Unusual Fire and Explosion Hazards: When heated to high temperatures, lead emits highly toxic fumes.

Section V - Reactivity Data		IDENTITY SPARKLE BALL S-2062	
Stability	Unstable	Conditions to Avoid Keep away from heat, sparks and open flames.	
	Stable		
Incompatibility	Strong oxidizing materials, acids, hydrogen peroxide.		
Hazardous Decomposition or Byproducts	lead oxide fume.		
Hazardous Polymerization	May Occur	Conditions to Avoid NA	
	Will Not Occur	X	
Section VI - Health Hazard Data			
Route of Entry :	Inhalation	Skin	Ingestion
Health Hazards	The chief effects of excessive lead intake are anemia, neurological disorders, and kidney damage.		
Carcinogenicity :	Not listed NTP	IARC Monographs	OHSA Regulated
Signs and Symptoms of Exposure	Symptoms of the neurological effects may include irritability, headaches, insomnia, delirium, convulsion, muscular tremors, and palsy of the extremities.		
Medical Conditions	Generally Aggravated by Exposure		
Emergency and First Aid Procedures			
Inhalation : Excessive overexposure may result in an acute or chronic illness. If symptoms are present, the individual should be removed from exposure and a physician consulted.			
Ingestion : Call a physician at once.			
Skin : For hot metal burns, exposed area should be cooled with water and get medical attention. After handling solder, wash thoroughly with soap and water.			
Section VII - Precautions for Safe Handling and Use			
Steps to Be Taken in Case Material is Released or Spilled Avoid inhalation of solder fume or dust. Vacuuming is recommended.			
Waste Disposal Method Contact supplier or a licensed chemical waste disposal contractor for treatment, packaging, and disposal requirements.			
Precautions to Be Taken in Handling and Storing Avoid breathing smoke during soldering. Wash hands before eating or smoking after handling solder.			
Other Precautions			
Section VIII - Control Measures			
Respiratory Protection A NIOSH approved dust/fume respirator should be worn where applicable limits may be exceeded.			
Ventilation	Local Exhaust	Remove smoke from breathing area	Special Not required
	Mechanical		Other
Protective Gloves	Use plastic or rubber gloves and aprons where necessary to avoid skin contact.		Eye Protection Safety glasses or goggles should be worn in areas where splashing may occur.
Other Protective Clothing or Equipment Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLV's.			
Work/Hygienic Practices			