

SECTION 1: Chemical Product and Company Identification

MSDS name: Stainless Steel (300, 400 Series)
Product form: Beads
Product name: SSB02, SSB05, SSB14B, SSB16, SSB32, SSB48, SSB60, SSB110, SSUFO35, SSUFO56 (BULK/RNA)
Company identification: Next Advance, Inc. 2113 State Highway Troy, NY 12180 USA www.nextadvance.com
For information, call: 518-674-3510
Emergency number: 518-674-3510
For CHEMTREC assistance, call: US:001-800-424-9300 / Europe:001-703-527-388
For Emergency, call: US:001-201-796-7100 / Europe: +32 14 57 52 99

SECTION 2: Composition, Information on Ingredients

CAS#	Chemical name	% weight
7439-89-6	Iron	38 – 86.5
7429-90-5	Aluminum	<0.01 - 0.05
7440-44-0	Carbon	<0.03 - 2
7440-47-3	Chromium	<0.1 – 27
7440-48-4	Cobalt	<0.01 – 0.75
7440-50-8	Copper	<0.18 – 4.5
7439-96-5	Manganese	<0.2 - 10
7439-98-7	Molybdenum	<0.04 - 5
7440-02-0	Nickel	<0.12 – 0.34
7723-14-0	Phosphorous	<0.01 – 0.6
7782-49-2	Selenium	<0.01 – 0.03
7440-21-3	Silicon	<0.15 - 2
7704-34-9	Sulfur	<0.01 – 0.06
7440-32-6	Titanium	<0.01 – 0.7
7440-03-1 7440-25-7	Columbium Tantalum	<0.01 to 1.1

Note: Various grades of steel will contain different combinations of the above elements. Trace elements may also be present in minimal amounts.

SECTION 3: Hazards Identification

EU Main Hazards: Not classified as hazardous.

Emergency Overview: Warning! Welding, sawing, brazing, grinding and machining may cause hazardous dust and/or fume to be released. This product is sold as a solid and does not present an immediate health or fire hazard.

Routes of Entry: None for product as supplied.

Carcinogenic Status: Not considered carcinogenic by NTP, IARC, and OSHA.

Target Organs: Eye - Skin - Lung for exposure to dust/fume during processing. See section 11 for additional information.

Health Effects – Eyes: Sharp edges on solid products may cause cuts or lacerations. Contains nickel which may cause skin sensitization on contact. Contact with dust or fume created during processing may cause irritation.

Health Effects – Skin: Sharp edges on solid products may cause cuts or lacerations. Contact with dust or fume created during processing may cause irritation and skin sensitization.

Health Effect – Ingestion: Ingestion is not a route of exposure under normal conditions of use.

Health Effects – Inhalation: Prolonged or repeated exposure to dust or fume created from processing may cause irritation of nose, throat and respiratory tract, headache and dizziness. Long term inhalation of iron may cause siderosis, a build-up of iron in the lungs.

SECTION 4: First Aid Measures

First Aid – Eyes: In case of injury to the eye, seek medical attention. If dust particles created by processing get into the eye, immediately flush eyes with large quantities of water for at least 15 minutes. Contact a physician.

First Aid – Skin: Seek medical help for serious cuts or lacerations or if irritation from contact with dusts persists.

First Aid – Ingestion: Not a route of exposure.

First Aid – Inhalation: For overexposure to airborne fumes and dusts created from processing, move to fresh air immediately and contact a physician.

SECTION 5: Fire-fighting Measures

Extinguishing Media: For molten metal use dry powder or sand. Do not use water on molten metal. Use extinguishing media appropriate for surrounding materials.

Unusual Fire and Explosion & Hazards: May release hazardous fumes during a fire.

Protective Equipment for Fire Fighting: Fire fighters should be equipped with self-contained breathing apparatus and full protective clothing to protect against potentially toxic and irritating fumes.

SECTION 6: Accidental Release Measures

For spills of dusts or small particles use vacuum or wet sweep methods. Avoid contact with skin and eyes. Place in suitable container for disposal. Dispose of waste materials in accordance with all federal, state and local regulations. Avoid release to waterways.

SECTION 7: Handling and Storage

When processing, use in well ventilated area and use local exhaust ventilation. Avoid inhaling dust and fumes. Avoid contact with eyes, skin and clothing. Store away from acids.

SECTION 8: Exposure Controls/ Personal Protection

Iron as Iron Oxide: ACGIH TLV: 5 mg/m³ TWA, Respirable fraction of the aerosol; OSHA PEL: 10 mg/m³ TWA fume
Manganese, Fume, as Mn: ACGIH TLV: 0.2 mg/m³ TWA; OSHA PEL: 5 mg/m³ CEIL (C)
Chromium Metal: ACGIH TLV: 0.5 mg/m³ TWA; OSHA PEL: 1 mg/m³ TWA
Copper, Dusts and mists, as Cu: ACGIH TLV: 1 mg/m³ TWA; OSHA PEL: 1 mg/m³ TWA
Nickel, Insoluble compounds, as Ni: ACGIH TLV: 0.2 mg/m³ TWA, Measured as inhalable fraction of the aerosol (Inorganic only)
Molybdenum and insoluble compounds, as Mo: ACGIH TLV: 10mg/m³ TWA, Measured as inhalable fraction of the aerosol ACGIH TLV: 3 mg/m³ TWA, Measured as respirable fraction of the aerosol
Silicon: OSHA PEL: 15 mg/m³ TWA Total dust; 5 mg/m³ TWA Respirable Fraction
Aluminum, Metal(dust): ACGIH TLV: 1 mg/m³ TWA; OSHA PEL: 15 mg/m³ TWA Total dust 5 mg/m³ TWA Respirable Fraction
Phosphorus, sulfur and carbon as Particulates Not Otherwise Classified (PNOC): OSHA PEL: 15 mg/m³ TWA Total dust; 5 mg/m³ TWA Respirable Fraction
Engineering Control Measures: Engineering methods to prevent or control exposure are preferred. Methods include process or personnel enclosure, mechanical ventilation (dilution and local exhaust) especially during welding, grinding or cutting, and control of process conditions.
Respiratory Protection: The specific respirator selected must be based on the airborne concentration found in the workplace and must not exceed the working limits of the respirator.
Hand Protection: Protective gloves
Eye Protection: Chemical goggles
Body Protection: Normal workwear

SECTION 9: Physical and Chemical Properties

Physical State Solid: Odor None
Color: Gray
pH: No data available
Melting Point (°F): ~2800
Specific Gravity: No data available
Flash Point (°F): Not flammable
Vapor Pressure (mm Hg @ 20°C): Not applicable
Solubility in Water: Insoluble
VOC: Not applicable
Vapor Density (Air = 1): Not applicable

SECTION 10: Stability and Reactivity

Stability: Stable under normal conditions.
Conditions to Avoid: Contact with incompatible materials
Materials to Avoid: Strong acids
Hazardous Polymerization: Hazardous polymerization will not occur.
Hazardous Decomposition Products: Oxides of iron and alloying elements

SECTION 11: Toxicological Information

Acute Toxicity: No relevant studies identified.

Chronic Toxicity/Carcinogenicity: Welding fumes: IARC Group 2B carcinogen (possibly carcinogenic to humans) Nickel: IARC Group 2B carcinogen (possibly carcinogenic to humans), NTP: Anticipated Carcinogen Contact with dust/fume from processing may cause respiratory sensitization (nickel) and skin sensitization (nickel, chromium, copper). Chronic exposure to ingredients contained in dust/fume from processing may cause adverse effects to the lungs, liver, kidneys and blood.

Genotoxicity: No relevant studies identified.

Reproductive/Developmental Toxicity: Chronic exposure to manganese dust may cause reproductive disorders.

SECTION 12: Ecological Information

Mobility: No relevant studies identified.

Persistence/Degradability: No relevant studies identified.

Bio-accumulation: No relevant studies identified.

Ecotoxicity: No relevant studies identified.

SECTION 13: Disposal Considerations

Waste Disposal: Waste must be disposed of in accordance with federal, state and local environmental control regulations.

SECTION 14: Transport Information

DOT CFR 172.101: Data Not Regulated

Proper Shipping Name: Not Regulated

UN Class: Not Regulated

UN Number: Not Regulated

UN Packing Group: Not Regulated

SECTION 15: Regulatory Information

EU Hazard Symbol and Indication of Danger: Not classified

R Phrases: None

S Phrases: None

TSCA Listing: This product contains ingredients that are listed on or exempt from listing on the EPA Toxic Substance Control Act Chemical Inventory.

EINECS Listing: This product contains ingredients that are listed on the European Inventory of Existing Commercial Chemical Substances (EINECS) or are exempt from listing.

DSL (Canadian) Listing: This product contains ingredients that are listed on the Domestic Substance List (DSL) or are exempt from listing.

WHMIS Classification: D.2.A

MA Right to Know Law: This product contains the following chemicals on the Massachusetts Right to Know Law: Manganese – Carbon – Phosphorus – Chromium – Copper – Molybdenum – Nitrogen – Nickel – Silicon – Aluminum

PA Right to Know Law: This product contains the following chemicals on the Pennsylvania Right to Know Law: Manganese – Phosphorus – Chromium – Copper – Molybdenum – Nitrogen – Nickel – Silicon – Aluminum

NJ Right to Know Law: This product contains the following chemicals on the

New Jersey Right to Know Law: Manganese – Phosphorus – Chromium – Copper – Molybdenum – Nickel – Silicon – Titanium – Aluminum

California Prop 65: This product contains the following materials which the State of California has found to cause cancer, birth defects or other reproductive harm: Nickel

SARA Title III Sect. 311/312: None

SARA Title III Sect. 313: This product contains the following chemicals that are listed in Section 313 at or above de minimis concentrations:

Protective Equipment: Gloves, Lab coat, Dust respirator. Be sure to use an approved/certified respirator or equivalent, Safety glasses.

SECTION 16: Other Information

NFPA Ratings: Health – 0; Flammability – 0; Reactivity – 0; Special Hazards – 0

HMIS Ratings: Health - 2*; Flammability – 0; Reactivity – 0; Personal Protection - See Section 8

*for dust/fume created from processing.

Glossary of Terms:

ACGIH—American Conference of Governmental Industrial Hygienists. A professional organization devoted to worker health protection. In particular, the organization publishes "Threshold Limit Values for Chemical Substances in the Work Environment" and the "Documentation of TLVs." The TLV booklet is one source which may be used in hazard determination. www.acgih.org.

CAS Number—The CAS Number is an identification number assigned by the Chemical Abstracts Service (CAS) of the American Chemical Society. The CAS Number is used in various databases, including Chemical Abstracts, for identification and information retrieval.

HMIS—Hazardous Materials Identification System. This is an integrated approach to working with hazardous materials. The system includes information on assessing hazards, labeling and training. It was devised by the National Paint and Coatings Association.

TLV—Threshold Limit Value. The TLVs are a group of recommended concentrations established by the ACGIH for worker protection. They are based on toxicity data generated from human and animal studies and industrial experience. TLVs are only recommendations to industry, whereas OSHA enforces the PELs (Permissible Exposure Limits).

TWA—Time-weighted average. This type of Threshold Limit Value established by the ACGIH is "the time-weighted average concentration for a normal 8-hour day and 40 - hour workweek, to which nearly all workers may be repeatedly exposed, day after day, without adverse effect."

CEIL - The ceiling limit is the maximum concentration of a toxic substance to which a person can be exposed to. Unlike some other standardized limits, ceiling limits do not have an exposure time. It represents a concentration that is immediately hazardous and should be avoided for any amount of time.