

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND CONTACT INFORMATION

Product Name: Steel Standards (Carbon, Nitrogen, Hydrogen, Oxygen or Sulfur Calibration Standards)

AR 869, AR 870, AR 871, AR 872, AR 873, AR 874, AR 875, AR 876, AR 878, AR 510, AR 511, AR 512, AR 881, AR 882, AR 883, AR 884, AR 885, AR 886, AR 888, AR 889, AR 890, AR 891, AR 892, AR 893, AR 894, AR 895, AR 946, AR 947, AR 948, AR 949, AR 950, AR 951, AR 952, AR 953, AR 954, AR 955, AR 956, AR 957, AR 958, AR 959, AR 961, AR 546, AR 555, AR 556, AR 558, AR 557, AR 644, AR 645, AR 646, AR1647, AR1648, AR1649, AR1650, AR1651, AR1652, AR1653, AR1655, AR 661, AR 660, AR 662, AR 663, AR 659, AR 657, AR 656, AR 654, AR 668, AR 655, AR 669

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2. COMPOSITION/INFORMATION ON INGREDIENTS

CAS NO.	%W	CHEMICAL NAMES	OSHA PEL (mg/m3)	ACGIH TLV (mg/m3)
7439-89-6	95-99	Iron	10	5 (as Iron Oxide)
7440-44-0	.01-1.0	Carbon	Not Estab.	Not Estab.
7439-96-5	.25-1.65	Manganese	5	5 (dust)
7440-21-3	.05	Silicon	10	10 (Total dust)
7704-34-9	.05	Sulfur	5	5 (as SO ₂)
7440-31-5	1.0	Tin	2	2 (Fume)

3. HAZARD IDENTIFICATION

POTENTIAL HEALTH EFFECTS

EYES: May cause eye irritation.

SKIN: May cause skin irritation.

INHALATION: Can irritate throat and mildly irritate mucous membranes, may experience metallic taste in mouth.

INGESTION: Not available.

CHRONIC OVEREXPOSURE: Can cause pulmonary effects, siderosis, bronchitis, lack of coordination, or benign pneumoconiosis of the lungs (stannosis).

ACUTE OVEREXPOSURE: Can cause metal fume fever.

MEDICAL CONDITIONS AGGRAVATED: Not available

CARCINOGENICITY: None.

4. FIRST AID MEASURES

EYES: Flush with large amounts of water. Get medical attention if irritation persists.

INHALATION: Removed from exposure to fresh air immediately. Get medical attention if breathing has stopped.

SKIN: Wash skin with plenty of soap and water. Get medical attention if irritation persists.

INGESTION: If significant amounts of metal are ingested, consult physician.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

Non-flammable

Flash Point: Not available

Flammable Limits: (% by Volume in Air): Lower: None Upper: None

AUTO-IGNITION TEMPERATURE: N/A

HAZARDOUS COMBUSTION PRODUCTS: N/A.

EXTINGUISHING MEDIA: Do not use water on molten metal

FIREFIGHTING INSTRUCTIONS: Steel does not present a fire or explosion hazard under normal conditions. Fine metal particles such as produced when sawing or grinding can burn. High concentrations of metallic fines in the air may present an explosion hazard.

6. ACCIDENTAL RELEASE MEASURES

SMALL/LARGE SPILL: Fine turnings should be swept or vacuumed. Scrap metal can be reclaimed for re-use.

7. HANDLING AND STORAGE

HANDLING: In welding, precaution should be taken for airborne contaminants which may originate from components of the welding rod. Arc or generated spark when welding or burning could be a source of ignition for combustion and flammable materials. Avoid generation of airborne fume and dust.

STORAGE: Keep container closed.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: local ventilation recommended if dust level exceeds PEL limit.

RESPIRATORY PROTECTION: NIOSH/MSHA respirator if exposure above the PEL limit.

SKIN AND HAND PROTECTION: Protective gloves should be worn as required for welding, burning or handling operations.

EYE AND FACE PROTECTION: Safety glasses with side shields should be worn when grinding or cutting. Face shields should be worn when welding or cutting.

OTHER PROTECTIVE EQUIPMENT: As required depending of operations.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Gray/black metal

BOILING POINT: None

FREEZE-MELT POINT: 2800 F (1538 C)

VAPOR PRESSURE: N/A

VAPOR DENSITY: N/A

SOLUBILITY IN WATER: Insoluble.

SPECIFIC GRAVITY: 7

pH: N/A

ODOR: None

PERCENT VOLATILES: N/A

EVAPORATION RATE: N/A

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable.

INCOMPATIBILITY: Reacts with strong acids to form hydrogen gas. Steel at temperatures above the melting point may liberate fume containing oxides of iron and alloying elements. .

HAZARDOUS DECOMPOSITION PRODUCTS: metallic dust or fumes during welding, burning, grinding and possible machining.

HAZARDOUS POLYMERIZATION: None.

11. TOXICOLOGICAL INFORMATION

Not available.

12. ECOLOGICAL INFORMATION

None available.

13. DISPOSAL CONSIDERATION

Dispose of in accordance with federal, state and local regulations and laws.

14. TRANSPORTATION INFORMATION

USA DOT: Not regulated

15. REGULATORY INFORMATION

US FEDERAL REGULATIONS

TSCA STATUS: On toxic Substance Control Inventory

CERCLA Reportable Quantity: None

RCRA Status: Not regulated

SARA TITLE III:

Section 302 Extremely Hazardous Substances: None

Section 311/312 Hazardous Categories: Acute, Chronic

Section 313 Toxic Chemicals: None

CANADAIN REGULATIONS

WHMIS: Not regulated

16. OTHER INFORMATION

SUPPLEMENTAL INFORMATION

The data and information as stated was furnished by the manufacturer/vendor &/or supplier of this product. Alpha Resources, Inc. cannot warrant the accuracy of this information and shall not be responsible or liable for any damage that may result, should any of the information be erroneous.

Date Prepared: January 11, 2013

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