

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Auralloy 250-B (Universal Stainless Steel Bare Rod)
AURALLOY PART NUMBER: 8740 - 8742
PRODUCT TYPE: Stainless Steel Bare Welding Wire
CHEMICAL FAMILY: N/A

DATE PREPARED: January 2000

CHROMATE INDUSTRIAL CORPORATION
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2. COMPOSITION / INFORMATION ON INGREDIENTS

IMPORTANT: Welding electrodes are a nonhazardous solid at ambient temperatures. This section covers the materials from which products are manufactured. The fumes and gases produced while welding during normal use of these products are covered in Sections III and VI

CHEMICAL NAME	% BY WEIGHT	OSHA PEL	ACGIH TLV	STEL	CAS #
Chromium (VI) (Soluble)*	Balance	N/D	0.05 mg/m ³	0.10 mg/m ³	7440-47-3
Nickel (Soluble)*	Balance	0.10 mg/m ³	0.10 mg/m ³	N/D	7440-02-0
Molybdenum (Soluble)	Balance	5.00 mg/m ³	5.00 mg/m ³	N/D	7439-98-7
Manganese (Fume)*	Balance	1.00 mg/m ³	1.00 mg/m ³	3.00 mg/m ³	7439-96-5
Silicon (SiO Amorphous Respirable)	Balance	0.10 mg/m ³	0.10 mg/m ³	N/D	60676-86-0
Copper (Fume)	Balance	0.10 mg/m ³	0.20 mg/m ³	N/D	7440-50-8
Iron (Oxide Dust & Fume)	Balance	10.00 mg/m ³	5.00 mg/m ³	N/D	1309-37-1
Welding Fume	Balance	5.00 mg/m ³	5.00 mg/m ³	N/D	NOC

*Substance identified by other sources as suspected or confirmed human carcinogen

* An asterisk (*) indicates the toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 and 40 CFR 372.

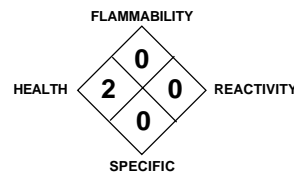
3. HAZARDS IDENTIFICATION

PRIMARY ROUTES OF ENTRY: (1) Inhalation of welding fumes (2) Burns from electromagnetic radiation

POSSIBLE EFFECTS OF OVEREXPOSURE: Short term exposure to welding may result in discomfort, dizziness, nausea and dryness or irritation of the eyes, lungs, nose and throat. Long term exposure to welding fumes, gases or dust may contribute to pulmonary irritation or pneumoconiosis. Long term exposure to iron fume may produce siderosis, which is generally regarded as benign. Nickel and chromium should be considered possible carcinogens per OSHA 29CFR 1910.1200. Certain nickel compounds have been implicated based on experience in some nickel refining operations. The specific compounds, however, have not been determined and a direct association between nickel in welding fume and cancer has not been demonstrated. Some compounds of hexavalent chromium have been reported to be carcinogenic. No clear association, however, has been established between chromium in welding fume and the development of cancer. Exposure limits should be maintained below the levels listed in Section II.

PRE-EXISTING MEDICAL CONDITIONS: Individuals with impaired function or illness may have symptoms exacerbated by irritants contained in welding fumes.

HAZARD RATINGS



HAZARD RATING:

- 4 = EXTREME
- 3 = HIGH
- 2 = MODERATE
- 1 = SLIGHT
- 0 = INSIGNIFICANT

4. FIRST AID MEASURES

EMERGENCY FIRST AID PROCEDURES:

INHALATION: Summon medical aid immediately. Remove from dust or fume exposure. If breathing has stopped, perform artificial respiration. If no detectible pulse, perform Cardio Pulmonary Resuscitation (CPR).

INGESTION: Call for medical aid. Employ first aid techniques recommended by American Red Cross.

SKIN CONTACT: For arc burn, apply cold, clean compresses.

EYE CONTACT: Call for medical aid. Employ first aid techniques recommended by American Red Cross.

5. FIRE FIGHTING MEASURES

FLASH POINT (METHOD USE): None **FLAMMABLE LIMITS: LEL** None **UEL** None

EXTINGUISHING MEDIA: This alloy is noncombustible. However, welding arcs and sparks can ignite combustible and flammable materials. Use extinguishing media appropriate to the surrounding fire.

FIRE FIGHTING PROCEDURES: If this material is reduced to powder form, caution must be used to prevent fire or explosion. To extinguish a metal powder fire, use dry sand, dry graphite or other class "D" fire extinguishing powder.

UNUSUAL AND EXPLOSION HAZARDS: No unusual fire or explosion hazards are associated with this material.

6. ACCIDENTIAL RELEASE MEASURES

SPILLS OR LEAKS: No data available

7. HANDLING AND STORAGE

SPECIAL PRECAUTIONS: Read and understand the manufacturer's instructions and the precautionary label on this product. See American National Standard Z-49.1, Safety in Welding and cutting, published by the American Welding Society, P.O. Box 31040, Miami FL 33135 and OSHA Publication 2206 (29CFR 1910), U.S. Government Printing Office, Washington D.C. 20402 for more details.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN: Read and understand the manufacturer's instructions and the precautionary label on this product. See American National Standard Z-49.1, Safety in Welding and Cutting, published by the American Welding Society, P.O. Box 351040, Miami, FL 33135 and OSHA Publication 2206 (29CFR 1910), U.S. Government Printing Office, Washington D.C. 20402 for more detail on the following:

RESPIRATORY: Use respirable fume respirator or air supplies respirator when welding, brazing or soldering in confined space or where local exhaust or ventilation does not keep exposure below PEL, TLV or STEL.

SKIN PROTECTION: Wear head and body protection which help to prevent injury from radiation, sparks, flame and electrical shock. See ANSI Z-49.1. At a minimum this includes welder's gloves and a protective face shield, and may include arm protectors, aprons, hats, shoulder protection, as well as dark substantial clothing. Train the employee not to touch live electrical parts and to insulate himself from work and ground. Welders should not wear short sleeve shirts, short pants or cutoffs.

EYE PROTECTION: Wear helmet or use face shield with filter lens of appropriate shade number (see ANSI/ASC Z49.1 Section 4.2). Provide protective screen and flash goggles, if necessary, to shield others.

VENTILATION: Use enough ventilation, local exhaust at the arc (or flame) or both, to keep the fumes and gases below the PEL's, TLV'S, or STEL's in the worker's breathing zone and the general area. Train the employee to keep his head out of the fumes. See ANSI/ASC Z49.1 Section 5.

ENGINEERING CONTROLS: No data available

9. PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT: N/A

VAPOR DENSITY (AIR = 1): N/A

SOLUBILITY IN WATER: Not Soluble

PERCENT VOLATILE BY VOLUME: N/A **VOLATILE WEIGHT:** N/A

APPEARANCE & ODOR: Solid wire or rod, odorless and grey to silver in color

PRODUCT WEIGHT: N/D

SPECIFIC GRAVITY (H₂O = 1): N/D

MELTING POINT: N/D **pH:** N/A

EVAPORATION RATE: N/A

FORM: Solid **VOLATILE COMPONENTS:** N/A

10. STABILITY AND REACTIVITY

STABILITY: SEE ATTACHED SUPPLEMENT **CONDITIONS TO AVOID:** SEE ATTACHED SUPPLEMENT

HAZARDOUS POLYMERIZATION: SEE ATTACHED SUPPLEMENT

INCOMPATIBILITY (MATERIALS TO AVOID): Avoid contact with mineral acids and oxidizing agents which may generate hydrogen gas; the evolution of hydrogen may be an explosive hazard.

HAZARDOUS DECOMPOSITION OR BYPRODUCTS: Various elemental metals and metal oxides may be generated from melting or dross handling operations. Refer to Section II for permissible exposure limits.

11. TOXICOLOGICAL INFORMATION

EYE: No data available.

SKIN: No data available.

INGESTION: No data available.

INHALATION: No data available.

SUBCHRONIC: No data available.

CHRONIC CARCINOGENICITY: NTP: Not Listed **IARC MONOGRAPH:** Not Listed **OSHA REGULATED:** Not Regulated

TERATOLOGY: No data available.

REPRODUCTION: No data available.

MUTAGENICITY: No data available.

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION: No data available.

CHEMICAL FATE INFORMATION: No data available.

13. DISPOSAL CONSIDERATIONS

RCRA HAZARD CLASS: No data available

WASTE DISPOSAL METHOD: Prevent waste from contaminating surrounding environment. Discard any product, residue, disposable container or liner in an environmentally acceptable manner, in full compliance with Federal, State and Local regulations.

14. TRANSPORT INFORMATION

TRANSPORTATION REQUIREMENTS (49CFR172-101)

D.O.T. CLASSIFICATION: Not regulated

D.O.T. SHIPPING NAME: Not regulated

15. REGULATORY INFORMATION

EXPOSURE LIMITS: No data available.

16. OTHER INFORMATION

The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof. Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in this MSDS. Additionally, vendor assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in his use of the material.