

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** Auralloy 220  
(Super Strength Electrode for Low to Medium Alloy Steels)  
**AURALLOY PART NUMBER:** 8705 - 8708  
**PRODUCT TYPE:** Covered Electrode for SMAW  
**CHEMICAL FAMILY:** N/A

**DATE PREPARED:** January 2000

**CHROMATE INDUSTRIAL CORPORATION**  
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## 2. COMPOSITION / INFORMATION ON INGREDIENTS

CHEMICAL NAME	% BY WEIGHT	OSHA PEL	ACGIH TLV	STEL	CAS #
Iron	65-75	10 mg/m <sup>3</sup> (as Fe)	10 mg/m <sup>3</sup> (as Fe)	N/D	7439-89-6
Manganese*	1-11	1 mg/m <sup>3</sup> (Fume)	1 mg/m <sup>3</sup> (Fume)	N/D	7439-96-5
Titanium Dioxide	1-11	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	N/D	13463-67-7
Sodium Silicate	1-11	Not Registered	5 mg/m <sup>3</sup>	N/D	1344-09-8
Potassium Silicate	1-11	Not Registered	5 mg/m <sup>3</sup>	N/D	1312-76-1
Calcium Carbonate	1-11	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	N/D	1317-65-3
Nickel*	1-11	1 mg/m <sup>3</sup>	1 mg/m <sup>3</sup>	N/D	7440-02-0
Chromium*	.1-3.1	.05 mg/m <sup>3</sup> (Cr VI)	.05 mg/m <sup>3</sup> (Cr VI)	N/D	7440-47-3
Calcium Flouride	1-11	2.5 mg/m <sup>3</sup> (as F)	2.5 mg/m <sup>3</sup> (as F)	N/D	7789-75-5
Lithium Al Silicate	1-11	2.0 mg/m <sup>3</sup> (as Al)	2 mg/m <sup>3</sup> (as Al)	N/D	12068-40-5
Molybdenum	.1-3.1	5 mg/m <sup>3</sup>	5 mg/m <sup>3</sup>	N/D	7439-98-7

\* 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:** Inhalation of welding fumes

**EFFECTS OF OVEREXPOSURE:**

**INHALATION:** Welding fumes and gases can be dangerous to your health. Pre-existing respiratory or allergic conditions may be aggravated in some individuals.

**SKIN CONTACT:** Arc rays can burn skin. Electric shock can kill.

**EYE CONTACT:** Arc rays can injure eyes.

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:** Short-term (acute) overexposure to welding fumes may result in discomfort such as dizziness, nausea or dryness or irritation of nose, throat or eyes.

**CHRONIC HEALTH HAZARDS:** Long-term (chronic) overexposure to welding fumes may lead to siderosis (iron deposits in the lungs) and is believed by some investigators to affect pulmonary function. Electric shock can kill.

## 4. FIRST AID MEASURES

**EMERGENCY FIRST AID PROCEDURES:**

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

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

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

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

## 5. FIRE FIGHTING MEASURES

**FLASH POINT (METHOD USE):** Nonflammable      **FLAMMABLE LIMITS: LEL:** N/A      **UEL:** N/A

**EXTINGUISHING MEDIA:** N/A

**FIRE FIGHTING PROCEDURES:** Welding arc and sparks can ignite combustibles. Refer to American National Standard Z49.1 for fire prevention during welding.

**UNUSUAL AND EXPLOSION HAZARDS:** No data available

## 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 in confined space or where local exhaust or ventilation does not keep exposure below TLV.

**SKIN PROTECTION:** Wear head, hand and body protection which helps to prevent injury from radiation, sparks 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 welder not to touch live electrical parts and to insulate himself from work and ground.

**EYE PROTECTION:** Wear helmet or use face shield with filter lens. As a rule of thumb, start with a shade darker to see the weld zone. Then go to the next lighter shade which gives sufficient view of the weld zone. Provide screens and flash goggles to shield others.

**VENTILATION:** Use enough ventilation, local exhaust at the arc, or both to keep the fumes and gases below the TLV's in the worker's breathing zone and the general area. Train the welder to keep his head out of the fumes.

**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 coated with flux for welding process.

**PRODUCT WEIGHT:** N/D

**SPECIFIC GRAVITY (H<sub>2</sub>O = 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):** SEE ATTACHED SUPPLEMENT

**HAZARDOUS DECOMPOSITION OR BYPRODUCTS:** SEE ATTACHED SUPPLEMENT

**11. TOXICOLOGICAL INFORMATION**

**EYE:** No data available.

**INGESTION:** No data available.

**SUBCHRONIC:** No data available.

**CHRONIC CARCINOGENICITY:** NTP: Cr,Ni

**TERATOLOGY:** No data available.

**REPRODUCTION:** No data available.

**MUTAGENICITY:** No data available.

**SKIN:** No data available.

**INHALATION:** No data available.

**IARC MONOGRAPH:** Cr,Ni

**OSHA REGULATED:** Cr

**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:** Dispose of any grinding dust or waste residues in accordance with EPA or 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.

N/D — NOT DETERMINED    N/A — NOT APPLICABLE    N/R — NOT REGULATED

Conforms to 29 CFR 1910.1200, OSHA

ANSI Z129.1 - 1988 American National Standard for Hazardous Industrial Chemicals