

MATERIAL SAFETY DATA SHEET

ISSUE DATE: 10/30/92

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Supersedes: Any Previous M.S.D.S. On This Product

EMERGENCY PHONE NUMBER: CHEM-TEL INC. 1-800-255-3924

I. IDENTIFICATION

PRODUCT NAME: STAINLESS STEEL 304-316 PRODUCTS

PRODUCT CLASS: Steel

C.L. Ward & Family Inc.
1460 Delbert's Drive
Monongahela, PA 15063

II. HAZARDOUS INGREDIENTS

<u>MATERIAL:</u>	<u>% WEIGHT</u>	OSHA	ACGIH
		<u>PEL</u>	<u>TLV</u>
Iron	59.8 - 7.60	10 mg/M3 (oxide fume)	5 mg/M3 (fume)
Manganese mg/M3 (dust)	2.00 (Max)	5 mg/M3	5
Silicon dust)	1.00 (Max)	15 mg/M3 (total dust)	10 mg/M3 (total 5 mg/M3 (resp. dust)
Chromium* (metal)	16 - 20	1 mg/M3 (metal)	0.5 mg/M3 0.5 mg/M3 (soluble)
Nickel* Molybdenum	0.05 mg/M3 (CR + 6) 8 - 14 3 (Max)	1 mg/M3 15 mg/M3 (insoluble)	1 mg/M3 10 mg/M3 (insoluble)

*Suspect Carcinogen by NTP and IARC

III. PHYSICAL DATA

APPEARANCE: Metallic Solid

SPECIFIC GRAVITY: 8.06

MELTING POINT: 2550 - 2650°F

IV. HEALTH HAZARD DATA

ROUTE OF EXPOSURE: Inhalation of dusts or fumes.

EFFECTS OF OVEREXPOSURE:

Acute Effect: Excessive inhalation of metal fumes can produce an acute reaction known as "metal fume fever."

Symptoms consist of chills and fever (very similar to and easily confused with flu symptoms) which come on a few hours after large exposures.

Chronic Effects: Only after six to ten years of exposure to iron dust or fume does one present any signs of pneumoconiosis (i.e. siderosis). Physical examinations of those exposed to iron dust have not indicated any

disability. Excessive and prolonged inhalation of manganese (generally over two years exposure) can cause damage to the central nervous system. The pathology resembles Parkinson's Disease. Also, workers routinely exposed to high concentrations of manganese display an unusually high incidence of respiratory disease. Excessive and repeated inhalation of chromium fumes

or dust may cause severe irritation, ulceration or cancer in the respiratory system. It is generally believed that the hexavalent

forms of chromium (Cr+6) are responsible for these effects. It is uncertain whether metallic chromium in dust-form can cause the

same effect noted above. Excessive inhalation of nickel fumes has been associated with respiratory cancer. Nickel is a potential sensitizer and may cause allergic reactions. Molybdenum has caused toxicity (anemia and poor growth) in farm animals, but there is no data documenting toxicity to humans due to industrial exposure.

V. EMERGENCY AND FIRST AID

INHALATION: If acute overexposure to dust or fumes occurs, remove victim from the adverse environment and seek medical attention.

SKIN CONTACT: Wash area of contact thoroughly with soap and water. If irritation persists, seek medical attention.

EYE CONTACT: Flush immediately with running water for fifteen minutes. If irritation persists, seek medical attention.

INGESTION: N/A

VI. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: N/A

EXTINGUISHING MEDIA: Use dry powder for metal fires.

SPECIAL PROCEDURES: Firefighters should wear equipment to protect against noxious fumes.

VII. SPILL OR LEAK PROCEDURES

Minimal problems with spills of this product would occur because of its solid form. However, if there is a spill of dust, clean up

using methods which avoid dust generation and the use of water, such as vacuum. If airborne dust is generated during the clean up, use an appropriate NIOSH-approved respirator.

Waste Disposal Method: Dispose of in accordance with appropriate federal, state and local regulations.

VIII. SPECIAL PROTECTION INFORMATION

VENTILATION: Local exhaust ventilation should be provided to keep worker exposures within allowable limits.

RESPIRATORY PROTECTION: Use NIOSH/MSHA approved organic vapor respirators when vapor concentrations exceed the TLV.

EYE PROTECTION: Personal protective equipment should be worn when there is a reasonable probability of injury.

PROTECTIVE GLOVES: As needed.

IX. CARCINOGENIC ASSESSMENT

Nickel and Chromium have been identified as suspect carcinogens by NTP, IARC or OSHA.

X. REACTIVITY DATA

STABILITY: Stable under normal conditions of handling and use.

CONDITIONS TO AVOID: Poor ventilation.

INCOMPATIBILITY: Strong acids (produce hydrogen gas).

HAZARDOUS DECOMPOSITION PRODUCT: Metallic oxide.

HAZARDOUS POLYMERIZATION: Will not occur.

XI. SPECIAL PRECAUTIONS

HANDLING AND STORAGE: Use good housekeeping practices to avoid excessive dust accumulation.

This information is taken from sources based upon data believed to be reliable; however, C.L. Ward & Family INC. makes no warranty as to the absolute correctness or sufficiency of any of the foregoing or that additional or other measures may not be required under particular conditions.

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