

MATERIAL SAFETY DATA SHEET

ISSUE DATE: 10/30/92

REVISED DATE: 5/15/09

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 Types All Grades**

PRODUCT CLASS: Steel

DUCTMATE INDUSTRIES, INC.

210 Fifth Street

Charleroi, PA 15022

II. HAZARDOUS INGREDIENTS

<u>MATERIAL:</u>	<u>% WEIGHT</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>
Iron	45 - 90	10 mg/M3 (TWA as Fume)	5 mg/M3 (TWA as Fume)
Manganese	0 - 15	1 mg/M3 (TWA as Fume)	1 mg/M3 (TWA as Fume)
Silicon	0 - 3	10 mg/M3 (TWA)	10 mg/M3 (TWA)
Chromium*	10.5 - 30	1 mg/M3 (TWA)	0.5 mg/M3 (TWA)
Nickel*	0 - 40	1 mg/M3 (TWA)	1 mg/M3 (TWA)
Molybdenum	0 - 5	5 mg/M3 (TWA as soluble)	5 mg/M3 (TWA as soluble)
Copper	0 - 5	0.1 mg/M3 (TWA as fume)	0.2 mg/M3 (TWA as fume)
Aluminum	0 - 1	5 mg/M3 (TWA as fume)	5 mg/M3 (TWA as fume)
Cobalt	0 - 1	0.05 mg/M3 (TWA)	0.05 mg/M3 (TWA)

*Suspect Carcinogen by NTP and IARC

III. PHYSICAL DATA

APPEARANCE: Metallic Solid

SPECIFIC GRAVITY: 7.65 - 7.94

MELTING POINT: 2550 - 2650°F

IV. HEALTH HAZARD DATA

ROUTE OF EXPOSURE: Inhalation of dusts or fumes.

EFFECTS OF OVEREXPOSURE:

Stainless, as a solid, is not toxic and presents no health hazard. Overexposure to dusts or fumes which may result during heating, grinding, cutting, brazing or welding can pose significant health hazards as described below.

Iron: Siderosis, no fibrosis

Nickel: Nickel compounds are suspect carcinogens by inhalation. The most common effect resulting from exposure to nickel compounds is "nickel itch", a form of dermatitis.

Chromium: Suspect carcinogen and tumorigen. Dermatitis may result from exposure to chromium fumes.

Manganese: Can affect central nervous system, including disturbances in gait and speech. Pulmonary system damage may result from inhalation of fume and dust.

Molybdenum: Irritation of nose and throat, weight loss and digestive disturbances in animals. No industrial poisoning have been reported.

Copper: May be responsible for one form of metal fume fever. Metal fume fever's symptoms include cough, headache, fever, nausea, chilling, pain in muscles and joints, and metal taste in mouth. This condition is usually transitory lasting one day or less.

Silicon: May produce X-ray changes in lungs without disability.

Aluminum: No known health effects.

Cobalt: an experimental carcinogen.

Medical conditions known to be aggravated by exposure to this material: Persons with lung disorders or diseases or skin disorders may be at added risk as a result of overexposure to this material.

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: During certain operations such as welding, burning, melting or hot rolling, metal fumes may be generated. Hexavalent chromium which is suspect carcinogen may result from pickling of stainless.

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, DUCTMATE INDUSTRIES, 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.