

SECTION 1 - MATERIAL IDENTIFICATION AND USE

Material Name: CARBON STEEL  
 Generic Name:  
 Manufacturer: Atlas Specialty Steels  
 Address: One Centre Street  
 Welland, Ontario  
 L3B 5R7  
 Emergency Telephone: (416) 735-5661

Classification: D2  
 Health:  
 Reactivity: Fire:  
 Specific:

Supplier:  
 Address:

Emergency Telephone: (416) 735-5661

Chemical Name: CARBON STEEL  
 Chemical Family: Not Applicable  
 Chemical Formula: Not Applicable

Molecular Weight: Not Applicable  
 Trade Name/Synonyms: AISI 1000, 1100, 1500 SERIES  
 Material Use:  
 STEEL PRODUCTS

SECTION 2 - HAZARDOUS INGREDIENTS OF MATERIAL

| Hazardous Ingredients | Approximate Concentration | C.A.S. U.M. Numbers | N.A. Specify Species & Route | LD50 / LC50 | Exposure Limits |
|-----------------------|---------------------------|---------------------|------------------------------|-------------|-----------------|
| IRON                  | 99 %                      | 7439-89-5           | 30 g/kg (rat-oral)           |             | 5 mg/M3         |
| MANGANESE             | 2                         | 7439-96-5           | 9 g/kg (rat-oral)            |             | 1 mg/M3         |
| NICKEL                | 0.75                      | 7440-02-0           | Not available                |             | 1 mg/M3         |
| CHROMIUM              | 0.75                      | 7440-47-3           | Not available                |             | 0.5 mg/M3       |
| COBALT                | 0.75                      | 7440-48-4           | Not available                |             | 0.05            |

Note: Concentrations represent a maximum for all grades within a category of steel products and must not be interpreted as a specification for a particular grade.

SECTION 3 - PHYSICAL DATA FOR MATERIAL

Physical State: Solid  
 Specific Gravity: 7.6 - 7.8  
 Odour Threshold (ppm): Not Applicable  
 Odour and Appearance:  
 SILVER/GREY METALLIC

Vapour Pressure(mm/Hg): Not Applicable  
 Vapour Density (Air=1): Not Applicable  
 Evaporation Rate: Not Applicable  
 Boiling Pt. (C): Not Applicable  
 Freezing Pt. (C): Not Applicable

Solubility in Water (20°C): Not Applicable  
 Percent Volatile, By Volume: Not Applicable  
 PH: N/A  
 Density (g/ml): Not Applicable  
 Coefficient to Water/  
 Oil Distribution: Not Applicable

SECTION 4 - FIRE AND EXPLOSION:

Flameability: No Conditions:  
 Means of Extinction: Not Applicable

Special Procedures:

Flashpoint (C) & Method: Not Applicable  
 Upper Explosion Limit (l by volume): Not Applicable  
 Lower Explosion Limit (l by volume): Not Applicable  
 Auto Ignition Temperature (C): N/A  
 TDG Flammability Classification:

Hazardous Combustion Products: Not Applicable  
 Chemical Sensitivity to Impact: Not Applicable  
 Rate of Burning: Not Applicable  
 Explosion Power: Not Applicable  
 Sensitivity to Static Discharge: Not Applicable

SECTION 5 - REACTIVITY DATA

Chemical Stability: Yes Conditions:

Incompatibility to other Substances: Yes Substances: CONTACT WITH MINERAL ACIDS WILL RELEASE HYDROGEN GAS

Reactivity Under What Conditions: Not Applicable

Hazardous Decomposition Products: Not Applicable



This is applicable to all grades of Steel  
the same info is on the back of all MSDS's for ATIAS

## ALLOY ENGINEERING STEELS

Atlas Specialty Steels

Material Safety Data Sheet

Central

Page 2 of 2

Material Name: ALLOY ENGINEERING STEELS

STAINLESS  
Carbon  
Alloy Tools

### SECTION 6 - TOXICOLOGICAL PROPERTIES OF PRODUCT

Route of Entry      Skin Contact: Yes      Skin Absorption:      Eye Contact: Yes  
Inhalation Acute: Yes      Inhalation Chronic: Yes      Ingestion:

Effects of Acute Exposure: None to shipped product. Welding or burning will generate metal fumes which can cause irritation to eyes, nose, and throat.

Effects of Chronic Exposure: None to shipped product. Chronic inhalation overexposure to metal fume (ie. iron oxide) may cause siderosis.

LD50 of Product (Species & Route): 9 G/KG (oral-rat)  
LC50 of Product (Species): Not Available  
Irritancy of Product: Not Applicable

Sensitization to Product: No known effects  
Exposure Limits of Product: See Section 2  
Synergistic Materials: No known effects

Carcinogenicity: Yes      Reproductive Effects:      Teratogenicity:      Mutagenicity:

### SECTION 7 - PREVENTIVE MEASURES

Personal Protective Equipment: Depends on the process being performed on the material. Each operation must be assessed.

Gloves: See PPE.  
Clothing: See PPE.

Respiratory: See PPE.  
Other:

Eye: See PPE.

Footwear: See PPE.

Engineering Controls: Adequate ventilation during welding, burning or grinding.  
Leaks & Spills: Not Applicable

Waste Disposal:  
Handling Procedures & Equipment: Not Applicable  
Storage Requirements: Not Applicable  
Special Shipping Information: Not Applicable

### SECTION 8 - FIRST AID MEASURES

Skin: Wash affected area with soap and water.  
Seek Medical attention if irritation persists.

Eye: For irritation from coating materials, flush eyes with plenty of water while holding eyelids open. Seek Medical attention if irritation persists.

Inhalation: For overexposure to metal fumes, remove to fresh air.  
Seek medical attention.

Ingestion: Not Applicable

General Advice: Some of the steel grades may have an oil coating or lime coating.  
Use impervious gloves when handling to prevent skin irritation.

### SECTION 9 - PREPARATION DATE OF M.S.D.S.

Additional Information: Certain nickel and chromium compounds have been listed by IARC as nasal and lung carcinogens.

Sources Used:

Prepared By: James Klys -Occ. Health Co-ord

Phone No: (416) 735-5661

Date: 01 Nov 91

Expiry Date: 01 Nov 94