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**LaurelSteel**  
A DIVISION OF HARRIS STEEL LIMITED

## MATERIAL SAFETY DATA SHEET

### SECTION 1 – MATERIAL IDENTIFICATION AND USE

Material Name : FREE MACHINING CARBON STEEL  
 Chemical Family: Steel  
 Material Use: Production of Steel Products  
 Chemical Formula and Molecular Weight: not applicable  
 Chemical Name, Trade Names and Synonyms: not applicable

### SECTION 2 – HAZARDOUS INGREDIENTS OF MATERIAL

\*NOTE: concentrations represent a maximum for all grades and must not be interpreted as a specification for a particular grade.

COATINGS: Material may be oiled, lime coated, or galvanized.

### SECTION 3 – PHYSICAL DATA FOR STEEL

Physical State and Appearance: Solid material. Silver or grey metallic  
 Specific Gravity: 7.6-7.8.  
 Melting Point: Material melts at 1530oC  
 Vapour Pressure and Density: not applicable  
 Evaporation Rate and Boiling Point: not applicable  
 % Volatiles and Odour Threshold: not applicable  
 Solubility in Water and pH: not applicable.

### SECTION 4 – FIRE AND EXPLOSION HAZARDS

Flammability : not flammable  
 Means of Extinction or Special Procedures: not applicable  
 Auto Ignition Temperature and Rate of Burning: not applicable  
 Flash Point and Upper/Lower Explosion Limits: not applicable  
 Sensitivity to Chemical Impact and Static Discharge: not applicable  
 Hazardous Combustion Products: not applicable  
 NOTE: Thermal degradation of coatings may release irritating hydrocarbons

### SECTION 5 – REACTIVITY DATA

Chemically Stable: Yes

Incompatibility with other Substances: not applicable

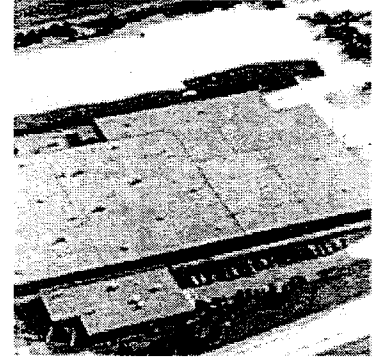
Reactivity and Conditions: contact with mineral acids will release hydrogen gas.

Hazardous Decomposition Products: Welding or cutting will generate fume.

### SECTION 6 – TOXICOLOGICAL INFORMATION

Effects of Acute Exposure to Products:Welding or cutting will generate fumes. Inhalation overexposure to fume may cause a flu-like condition (e.g. chills, nausea) called metal fume fever.

Effects of Chronic Exposure to Products:Welding or cutting will generate metal fume and dust. Prolonged inhalation overexposure to dust or fume may result in conditions such as Siderosis with few or no symptoms (Siderosis is an accumulation of iron oxide in the lungs). Lead poisoning may result from



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chronic exposure to fumes.

Skin contact with coating materials may cause skin irritation and/or dermatitis with prolonged contact.

Sensitization to Product: no known effects

Synergistic Materials: no known effects

Mutagenic, Teratogenic, or Reproductive Effects: no known effects

#### SECTION 7 – PREVENTIVE MEASURES

Personal Protective equipment:

Personal protective equipment required is dependent on the process being performed on the material (e.g. burning or cutting). Each operation must be addressed for suitable personal protective equipment.

Gloves: recommended for prolonged contact. Barrier creams may be used when handling oily steel.

Glasses and footwear: to be worn as required or as appropriate.

Respirators: NIOSH approved respiratory protection as appropriate.

Engineering Controls: use appropriate ventilation (general or local) when welding, cutting or grinding.

#### SECTION 8 – FIRST AID

Skin: wash affected area with soap and water. Seek medical attention if irritation persists.

Eyes: 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 for adverse symptoms.

Ingestion: not applicable

#### SECTION 9 – PREPARATION DATA

Prepared by: Sandro DeSordi, Quality Assurance Manager

Telephone: 1-905-681-6811

MSDS date: 13 January 2004



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ISO 9002 Registered

QS 9000 Registered



## Carbon Steel Safety Data



### MATERIAL SAFETY DATA SHEET

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#### SECTION 1 - MATERIAL IDENTIFICATION AND USE

**Material Name : CARBON STEEL**  
 Chemical Family: Steel  
 Material Use: Production of Steel Products (including mesh, wire and bar products)  
 Chemical Formula and Molecular Weight: not applicable  
 Chemical Name, Trade Names and Synonyms: not applicable

#### SECTION 2 - HAZARDOUS INGREDIENTS OF MATERIAL

ELEMENT	MAXIMUM*	PEL as fume (mg/m3)
Carbon	1.00	3.5
Manganese	2.20	5.0
Phosphorus	2.25	0.1
Sulphur	0.50	n/a
Lead	n/a	0.05
Silicon	n/a	5.0
Iron	balance	10.0

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**NOTE:** Thermal degradation of coatings may release irritating hydrocarbons

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MSDS expiry date: 13 January 2007