

MATERIAL SAFETY DATA SHEET
HOT ROLLED CARBON STEEL REINFORCING BARS
SECTION I - MATERIAL IDENTIFICATION

Manufacturer's Name Gerdau AmeriSteel	Emergency Telephone Number 813/286-8383
Contact Matt D. Moore Director, Safety & Health	Telephone Number for Information 813/286-8383
Address P. O. Box 31328 Tampa, FL 33631-3328	Date Prepared 12/11/92
Product Hot Rolled Carbon Steel Reinforcing Bars	

SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

<u>Hazardous Components (Common Name)</u>	<u>CAS No.</u>	<u>OSHA PEL (mg/m³)</u>	<u>ACGIH TLV (mg/m³)</u>	<u>Other Limits Recommended</u>	<u>% (optional)</u>
Iron (as Iron Oxide fume)	1309-37-1	10.0	5.0	n/a	97.0
Carbon (as Carbon Dioxide)	124-38-9	9,000.0	9,000.0	n/a	0.9
Manganese	7439-96-5	5.0	0.2	n/a	2.0
Phosphorous (yellow)	7723-14-0	0.1	0.1	n/a	0.06
Sulfur (as Sulfur Dioxide)	7446-09-5	13.0	2.0	n/a	0.08
Silicon	7740-21-3	(Total Dust) 15.0	(TWA) 10.0	n/a	0.4
Copper (as fume)	7440-50-8	0.1	0.2	n/a	1.5
Vanadium (as fume)	1314-62-1	0.05	0.05	n/a	0.05
Nickel	7440-02-0	1.0	1.5	n/a	0.5
Tin (inorganic)	7740-31-5	2.0	2.0	n/a	0.08

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point 3000°C (5432°F)	Specific Gravity (H₂O = 1) 7.0
Vapor Pressure (mm Hg) n/a	Melting Point 1535°C (2795°F)
Vapor Density (AIR = 1) n/a	Evaporation Rate (Butyl Acetate = 3) n/a
Solubility in Water n/a	Appearance and Odor Gray solid/metallic odor or odorless

SECTION IV - FIRE AND EXPLOSION HAZARD

Flash Point (Method Used) n/a	Flammable Limits	LEL	UEL
Extinguishing Media For molten metal, use Class D chemical or sand		n/a	n/a
Special Fire Fighting Procedures n/a			
Unusual Fire and Explosion Hazards Concentrations of metallic fines in the air could present an explosion hazard			

SECTION V - REACTIVITY DATA

Stability	Unstable	Stable	Conditions to Avoid
		X	n/a
Incompatibility (Materials to Avoid)			
Strong Acids			
Hazardous Decomposition or Byproducts			
Metal fumes if heated			
Hazardous Polymerization	May Occur	Will Not Occur	Conditions to Avoid
		X	Above the melting point, iron oxide fumes may be present

SECTION VI - HEALTH HAZARD DATA

Route(s) of Entry	Inhalation?	Skin?	Ingestion?
	Fumes if heated sufficiently	no	no
Carcinogenicity	NTP?	IARC Monographs?	OSHA Regulated?
Nickel	n/a	n/a	no
Signs and Symptoms of Exposure			
<u>Acute:</u> Fume inhalation - irritation of eyes, nose, throat, and lungs. Metal fume fever or flu-like symptoms.			
<u>Chronic:</u> Fume inhalation - bronchitis, pneumonitis, siderosis, upper respiratory tract irritation, headaches, lack of coordination, metal fume fever.			
Medical Conditions Generally Aggravated by Exposure			
Respiratory conditions may be aggravated by exposure to metal fumes or dusts.			
Emergency and First Aid Procedures			
<u>Inhalation:</u> move to fresh air, administer oxygen if necessary. Call a physician.			

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps to be Taken in Case Material is Released or Spilled
Fine particles and small chips should be swept up and disposed of properly.
Waste Disposal Method
Follow all solid waste disposal regulations of local, state, and Federal authorities.
Precautions to Be Taken in Handling and Storing
n/a
Other Precautions
User should consult applicable standards for specific process employed to determine any special precautions needed to insure the health and safety of its employees.

SECTION VIII - CONTROL MEASURES

Respiratory Protection		
NIOSH-approved dust/mist/fume respirator if P.E.L. is exceeded.		
Ventilation	Local Exhaust	Special
	To keep welding fumes below P.E.L.	n/a
	Mechanical (General)	Other
	Recommended	n/a
Gloves Protective		Eye Protection
As per A.W.S. recommendations		Safety glasses or goggles as per ANSI Z-86.1.
		Welding hood for welding, cutting, burning or brazing.
Other Protective Clothing or Equipment		Work/Hygiene Practices
As per applicable standards for process		Observe safe work practices