



North America, Inc.

MATERIAL SAFETY DATA SHEET

Flat Rolled Steel – All Grades

PRODUCT AND COMPANY IDENTIFICATION

Product Identifier Flat Rolled Steel – All Grades

Company Identity

Name: SeverStal North America, Inc.
Address: 3001 MILLER RD
DEARBORN, MI 48121
Telephone: (313) 323-1261

Emergency Telephone Number

Health Contact: (313) 714-9501 (24 hour pager)

COMPOSITION, INFORMATION OR INGREDIENTS

Flat Rolled Steel - Disclosed Composition

Chemical	CAS No.	Percent (%)
Iron	7439-89-6	98
Manganese	7439-96-5	2

CAS No. - Chemical Abstracts Service Registry Number

HAZARD IDENTIFICATION

=(A)===== HAZARDS =====

POTENTIAL HEALTH EFFECTS: Flat rolled steel products in their usual physical form do not pose a health hazard. Inhalation of metal dust, mist or fume may result from further processing of the material by the user, particularly during welding, burning, grinding, machining, and brazing activities and should be evaluated by an industrial hygienist.

The hazard statements below refer to prolonged and repeated exposure to fumes or dusts generated during heating, cutting, brazing, machining or welding.

INHALATION: May be harmful by inhalation. Excessive inhalation of this material causes headache, dizziness, nausea and incoordination. Causes metal fume fever with resulting flu-like symptoms.

EYES: May cause irritation – foreign body hazard. Seek medial attention.



North America, Inc.

MATERIAL SAFETY DATA SHEET
Flat Rolled Steel – All Grades

HAZARD IDENTIFICATION (cont.)

SKIN: Not anticipated to pose a significant skin hazard. However, should dermatitis develop, wash affected areas thoroughly with mild soap and water. If irritation persists, seek medical attention.

INGESTION: Not considered an ingestion hazard

CHRONIC (CANCER) INFORMATION: (see available data for individual ingredients)

CARCINOGENICITY:

NTP: NA

IARC MONOGRAPHS: NA

OSHA REGULATED: NA

PRIMARY ROUTE(S) OF ENTRY: Ingestion or inhalation during rework/fabrication as indicated above

SIGNS AND SYMPTOMS OF EXPOSURE: Excessive inhalation of this material may cause headache, dizziness, nausea and problems with coordination or flu-like symptoms.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Dust and fume exposure can aggravate individuals with chronic diseases or disorders of the respiratory system.

=(B)===== TARGET ORGANS AND MEDICAL CONDITIONS =====

TARGET ORGANS: NONE=See available data for individual ingredients.

FIRST AID MEASURES

EYES: Irrigate immediately. Treat for foreign body in eye. Seek medical attention.

INHALATION: If inhalation of gas/fume/vapor/dust/mist from the material is excessive (air concentration is greater than the TLV or health effects are noticed), immediately remove the affected person(s) to fresh air.

CONTACT WITH EYES: Irrigate immediately. Treat for foreign body in eye. Seek medical attention.

SKIN CONTACT: Wash hands thoroughly after handling. Shower before changing clothes.

INGESTION: Not considered an ingestion hazard.



SeverStal

North America, Inc.

MATERIAL SAFETY DATA SHEET

Flat Rolled Steel – All Grades

FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES:

FLASH POINT: N/A NON-FLAMMABLE SOLID
METHOD: N/A

FLAMMABLE LIMITS:

LOWER FLAMMABLE LIMIT: N/A
UPPER FLAMMABLE LIMIT: N/A

AUTOIGNITION TEMPERATURE: N/A

HAZARDOUS COMBUSTION PRODUCTS: Metal oxides of listed ingredients and carbon monoxide from non-metallic coatings.

EXTINGUISHING MEDIA: N/A

FIRE FIGHTING INSTRUCTIONS: Steel products do not present fire or explosion hazards under normal conditions.

UNUSUAL FIRE & EXPLOSION HAZARD: Irritating and/or toxic fumes and gases may be emitted upon heating of this product. Molten metal may react violently with water. High concentrations of metallic fines may create an explosion hazard. Fire fighters are to wear full protective equipment, including bunker gear and positive pressure self-contained breathing apparatus (SCBA).

ACCIDENTAL RELEASE MEASURES

Information for this section is not available. Excess product can be recycled for further use.

HANDLING AND STORAGE

HANDLING: In case of insufficient ventilation, wear suitable respiratory equipment. Do not breathe fumes or dust from this material. Avoid breathing fumes if this product is used at high temperatures. Use this product with adequate ventilation.

STORAGE: Store in dry area to avoid oxidation.



North America, Inc.

MATERIAL SAFETY DATA SHEET

Flat Rolled Steel – All Grades

EXPOSURE CONTROLS, PERSONAL PROTECTION

Exposure Limits USA

Canada

Chemical	CAS No.	TWA			C or STEL (a)		IDLH	Cancer Class (b)	OEL
		OSHA PEL/ MIOSHA TWA	ACGIH TLV	NIOSH REL					
Iron	7439-89-6	5mg/m ³ Fu, 1 mg/m ³ Sol/10 Fu mg/m ³ (as Fe)	5mg/m ³ Fu (as Fe)	5 mg/m ³ (as Fe)	NA	NA	2500 mg/m ³ (as Fe)		5 mg/m ³ (Fe)
Manganese	7439-96-5	5 mg/m ³ (Du), 5 mg/m ³ Fu (S3)/C5, 1 Fu (S3) mg/m ³ (as Mn)	0.2 mg/m ³ (Du as Mn) 1 mg/m ³ (Fu as Mn)	1 mg/m ³	C 5 mg/m ³	3 mg/m ³	500 mg/m ³	NL	NA

CAS No. = Chemical Abstracts Service Registry Number, TWA = Time Weighted Average, C = Ceiling, STEL = Short Term Exposure Limit, IDLH = Immediately Dangerous to Life and Health, NL = Not Listed; OEL = Canadian Occupational Exposure Limit; TWAEV = Time weighted average exposure value; mg/m³ = mg per cubic meter, ppm = parts per million, a) OSHA/ MIOSHA = D, ACGIH = A, NIOSH = N; b) NTP, OSHA/ MIOSHA, ACGIH

ENGINEERING CONTROLS: Localized mechanical exhaust ventilation recommended when grinding, cutting, welding, burning, or brazing.

RESPIRATORY PROTECTION: Use a dust/mist/fume particulate filter respirator for concentrations exceeding the applicable TLV's, OEL's, or PEL's.

VENTILATION: Localized mechanical exhaust ventilation recommended when grinding, cutting, welding, burning, or brazing.

SKIN PROTECTION: Use of an impervious apron, protective coveralls, and log sleeves is recommended. Wear thermal gloves.

EYE PROTECTION: Wear goggles, protective eyewear or full face shield.

PHYSICAL AND CHEMICAL PROPERTIES

Material type: Solid

Parameter	Value
Boiling Point	NA
Melting Point	2,400-2,800 F
Vapor Pressure	NA
Solubility in Water	NA
Specific Gravity	8



Severstal

North America, Inc.

MATERIAL SAFETY DATA SHEET
Flat Rolled Steel – All Grades

Parameter	Value
Density	500lb/cf
Freezing Point	NA
Percent Volatile (by water)	NA
Evaporation Rate	NA
PH	NA
Appearance	Solid Metallic
Odor	None

NA=Not available or Not Applicable.

STABILITY AND REACTIVITY DATA

CHEMICAL STABILITY: Stable

INCOMPATIBILITY: NA

HAZARDOUS DECOMPOSITION PRODUCTS: Metal oxides of listed ingredients and carbon monoxide from nonmetallic coatings.

HAZARDOUS POLYMERIZATION: Will not occur

CONDITIONS TO AVOID: Acids

TOXICOLOGICAL INFORMATION

EYE: Treat as foreign body in eye. Seek medical attention.

SKIN: Not anticipated to create a significant skin hazard.

INGESTION: Based on the composition of the product identified by the supplier, selected portions of the acute toxicity information from RTECS are as follows:

7439-96-5 Manganese
Oral, Adult Rat, LD50 = 9 GM/KG

7439-89-6 Iron
Oral, mouse, LD50=5.4GM/KG

INHALATION: Iron Oxide: Long term excessive inhalation to iron oxide fume or dust has been associated with a benign lung condition known as siderosis. No physical impairment of lung function has been linked to siderosis.

SUBCHRONIC: NA

TERATOLOGY: NA

REPRODUCTION: NA



North America, Inc.

MATERIAL SAFETY DATA SHEET

Flat Rolled Steel – All Grades

MUTAGENICITY: NA

ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION: NA**CHEMICAL FATE INFORMATION:** NA – Exposure to moist air may develop oxidation

TRANSPORTATION INFORMATION

NOT REGULATED AS US DOT HAZARDOUS MATERIAL OR CANADIAN DANGEROUS GOODS

REGULATORY INFORMATION

U. S. REGULATIONS

OSHA HAZARD COMMUNICATION RULE, 29 CFR 1910.1200: N/A

CERCLA/SUPERFUND, 40 CFR 117,302: N/A

SARA HAZARD CATEGORY: Delayed (chronic) health hazard (see below)

SECTION 313: This product contains a toxic chemical or chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

INTERNATIONAL REGULATIONS

CANADIAN WHMIS: NA

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA): NA

EINECS: NA

STATE REGULATIONS

VOLATILE ORGANIC COMPOUNDS (VOC): NA

HMIS

Health Hazard 0

Fire Hazard 0

Reactivity 0

Safety Glasses, Gloves, Dust, Mist, Fume and Vapor Respirator



North America, Inc.

MATERIAL SAFETY DATA SHEET
Flat Rolled Steel – All Grades

REGULATORY INFORMATION (cont.)

NFPA

Health Hazard	0
Fire Hazard	0
Reactivity	0

Safety Glasses, Gloves, Dust, Mist, Fume and Vapor Respirator

OTHER INFORMATION

This material may pose the identified health hazards if operations are performed which can generate metal fumes, dusts or mists (i.e., cutting, grinding, burning, brazing, welding, etc.).

During welding precautions should be taken for airborne contaminants and noxious gases that may originate from the welding process. Use of mechanical localized exhaust ventilation is recommended during these procedures.

Nonmetallic coatings may be applied to the rolled steel. These coatings constitute less than 0.1% by weight of the product and are classified as protective coatings or lubricants. (A separate MSDS is available for the specific coating.)

PREPARATION INFORMATION

Date of Preparation: 03/19/2002 Revised: 04/15/2004

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Disclaimer: The information provided is believed to be accurate but does not purport to be all-inclusive. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person. No warranties, either expressed or implied, are made.