

Bar GRATING



GRUPO METELMEX, S.A. DE C.V.

MATERIAL SAFETY SHEET
Carbon Steel Bar Grating

SECTION I. MATERIAL IDENTIFICATION

Company GRUPO METELMEX, S.A. DE C.V. Francisco de Luna #2000 Col. Borja	RE-ISSUE DATE 16/01/2009	IDENTIFICATION NUMBER
TRADE NAME Steel Bar Grating	EMERGENCY NUMBER 18888085876	PREPARED BY Orlando Hipólito Plaza
CHEMICAL NAME Steel Bars	FORMULA DOT N/A	IDENTIFICATION NO. 2009/001

SECTION II. HAZARDOUS INGREDIENTS

MATERIAL OR COMPONENT	% COMPOSITION	OSHA-mg/m3
BASE METAL	CAS NUMBER	OSHA-PEL 8-HR.-TWA
IRON		IRON OXIDE 10

NOT ALL OF THE ELEMENTS LISTED BELOW ARE PRESENT IN ALL ALLOYS OF STAINLESS STEEL.

ALLOYING	% COMPOSITION		OSHA-mg/m3
ELEMENTS	CAS NUMBER	BY WEIGHT (1)	OSHA-PEL 8-HR.-TWA
CARBON	7440-44-0	.01-1.10	AS CARBON 15.0
MANGANESE	7439-96-5	.25-1-.65	AS MANGANESE 5.0
PHOSPHORUS	7723-14-0	.04 MAX.	AS PHOSPHORUS 0.1
SULFUR	05/09/7446	.001-.35	AS SULFUR DIOXIDE 15.0
SILICON	7440-21-3	.01-0.5	AS SILICON DUST/FUME 5.0
LEAD	7439-92-1	.15-.35	AS LEAD DUST/FUME 0.1
VANADIUM	1314-62-1	.01-.25	AS VANADIUM PENTOXIDE 15.0
NICKEL	7440-02-0	.01-.375	AS NICKEL 1.0
CHROMIUM	7440-47-3	.01-2.50	SOLUBLE CHROMIC/SALTS 0.5
MOLYBDENUM	7439-98-7	.01-1.10	SOLUBLE MOLY. COMPOUNDS 15.0
COPPER	7440-50-8	.50 MAX.	AS COPPER DUST 1.0
ALUMINUM	7429-90-5	.10 MAX.	AS ALUMINUM 15.0

PEL=Permissible Exposure Limit

(1) % of Alloying Material Varies with Grade of Material. Other trace elements of <1% May be in Present.

SECTION III. PHYSICAL DATA

MATERIAL (At Normal Conditions) SOLID	APPEARANCE AND ODOR Metallic appearance; No Odor
MELTING POINT >2400 Deg. F (1300 Deg. C)	SPECIFIC GRAVITY About 7.8

SECTION IV. FIRE AND EXPLOSIVE

SPECIAL FIRE FIGHTING PROCEDURES: Damp dust with hydrogen may form explosive air mixtures. Small chips, fine turnings and dust may ignite readily. Explosion potential may exist when dust and fines are dispersed in the air. Avoid contact with metal oxides, molten aluminium and moisture. Carbon Steel Products in their solid state present no fire or explosive hazard.

SECTION V. REACTIVITY DATA

STABILITY Stable	CONDITIONS TO AVOID Be Aware Of Unsecured Loads
HAZARDOUS DECOMPOSITION PRODUCTS Metallic Dust Or Fumes May Be Produced During Welding, Burning, Grinding And Possibly Machining. Refer To ANSI Z49.1	

SECTION VI. ENVIRONMENTAL

SPILL OR LEAK PROCEDURES	N/A
WASTE DISPOSAL METHODS	Disposal must comply with applicable Federal, State and Local disposal and discharge laws

SECTION VII. HEALTH HAZARD DATA

NOTE:	STEEL PRODUCTS IN THEIR NATURAL STATE DO NOT PRESENT AN INHALATION OR CONTACT HAZARD, HOWEVER OPERATIONS SUCH AS BURNING, WELDING, SAWING, BRAZING AND GRINDING MAY RELEASE FUMES AND/OR DUST WHICH MAY PRESENT HEALTH HAZARDS. THERE IS NO AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS (ACGIH) THRESHOLD LIMIT VALUE (TLV) OR OSHA EXPOSURE LIMIT, PEL, FOR STEEL.
EFFECTS OF OVEREXPOSURE:	
Acute -	Dust or fume may cause irritation to the eyes, nose, or throat and may leave a metallic taste in the mouth. Inhalation of oxides of Manganese, or Copper may be manifested as flu-like symptoms commonly known as "metal fume fever". Phosphorus dust is considered a nuisance dust.
Chronic -	Tantalum dust and fume can be toxic when inhaled
Aluminum:	Inhalation of Aluminum Oxide fume or an accumulation of Silicon in the lungs may result in benign pneumoconiosis.
Chromium:	May enter and affect the body through inhalation, ingestion, or skin contact. The National Toxicology Program (NTP) and the International Agency for Research on Cancer (IARC) report they possess sufficient evidence to establish a causal relationship for human cancer from Chromium.
Cobalt:	Lung inflammation and damage, and diffuse pulmonary fibrosis from inhalation. Classified as a carcinogen by IARC.
Copper:	Inhalation may cause nose and throat irritation and metal fume fever and prolonged contact may cause dermatitis, discoloration of skin, hair and teeth.
Iron:	Inhalation of Iron Oxide fume or dust may result in a condition known as siderosis.
Lead:	Lead compounds can be toxic when ingested or inhaled. Lead is a cumulative poison and excessive exposure can have an adverse effect on human reproduction. Acute exposure to lead can be manifested as abdominal pain, nausea, constipation, anorexia, or vomiting, and in severe cases death.
Manganese:	Inhalation may result in symptoms such as headache, restlessness, neurological dysfunction, or muscular weakness.

Nickel:	Inhalation may result in inflammation of the respiratory tract and fever The National Toxicology Program (NTP) and the International Agency for Research on Cancer (IARC) report they possess limited evidence for human cancer from Nickel Compounds.
Sulfur:	Inhalation of sulfur Dioxide gas can cause irritation of the respiratory tract, causing bronchial irritation, difficulty in breathing and pulmonary edema.
Molybdenum:	Slight irritation of senses Animal studies suggest digestive disturbances and development of pneumoconiosis, anemia, and gout.
Vanadium:	Inhalation of Vanadium oxides may result metallic taste, throat irritation, cough and/or bronchitis. Contact may cause local irritation.
Welding Fume:	Is listed as a possible carcinogen to humans.
Coatings:	If coated with oil, contact may cause skin irritation/dermatitis.

SECTION VIII. EMERGENCY AND FIRST AID PROCEDURES

Inhalation:	In the event of excessive exposure to dust or fume, remove the employee to fresh air. If breathing is difficult administer artificial respiration or oxygen. Obtain immediate medical assistance.
Skin:	Abrasions and cuts should be washed and closed by a clean compress and be immediately medicalle treated. Should skin irritation occur, wash affected area with mild soap and rinse with clean warm water. Obtain medical assistance.
Eyes:	Depending on the type and nature of exposure, relief may be obtained by fresh air or rinsing the eyes with clean water. Obtain medical assistance.
Medical Conditions Aggravated by Exposure:	Persons with a predisposition to respiratory disorders may be adversely affected by particulates or respiratory irritants generated during the mfg. process.

SECTION IX. SPECIAL PROTECTION INFORMATION & CONTROL MEASURES

Note:	Consults your regional codes or Code of Federal Regulations.
Ventilation:	Additional air make up system may be required if, local exhaust or ventilation System are not sufficient to mantain exposure levels to contaminates below prescribed limits. When inhalation controls are not sufficient to reduce the exposure below the applicable exposure limit then use OSHA/NIOSH approved respiratory protection within the use limitations of the respirator.
Personal Protection:	To avoid contact use appropriate protective gloves or clothing to protect against cutting edges Appropriate heat shielding garments should be used for activities using or generating heat. Eyes should be protected by using safety glasses, goggles, helmet, face shiled as appropriate to the operation.
Precautions to be taken in handling and storage:	Be alert to sharp edges and unsecured lifts.