



Steel 0512V

Material Safety/Health Data Sheet

W-4124 8-84

DATE
November 15, 1984

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MANUFACTURER'S NAME & ADDRESS
LTV Steel Company P.O. Box 6778 Cleveland, Ohio 44101 - B-LINE SYSTEMS

NAME & TITLE OF INDIVIDUAL SUPPLYING INFORMATION

T.M. Civic Manager Environmental Health

AREA CODE & PHONE NO.
(216) 622-5242AREA CODE & LTV EMERGENCY PHONE NO.
(216) 622-5000

PRODUCT NAME/TRADE NAME

Hot/Cold Rolled Alloy Steel - Bar & Wire

CHEMICAL NAME & SYNONYMS

Example AISI 8620

RECOMMENDED USE

NOTE: Ingredients and % wt. vary according to order specification

CAS#

% wt.

Permissible Exposure Limits

Units

Base Metal: Iron

1309-37-1

86 - 99

PEL as Iron Oxide Fume

10 mg/M³

Alloys:

Carbon

7440-44-0

.01 - 1.10

None Listed

Manganese

7439-96-5

.25 - 2.0

PEL(c) as Manganese

5 mg/M³

Phosphorus

7723-14-0

.035 max.

PEL as Phosphorus (Yellow)

.1 mg/M³

Sulfur

7704-34-9

.001 - .10

PEL as Sulfur Dioxide

13 mg/M³

Silicon

7740-21-3

.15 - 2.20

None Listed

Nickel

7740-02-0

.01 - 3.75

PEL as Nickel

1 mg/M³

Chromium

7740-47-3

.01 - 2.50

PEL - Soluble Chromic/
Chromous Salts.5 mg/M³

Molybdenum

7439-98-7

.01 - 1.10

PEL - Soluble Moly. Compounds

5 mg/M³

Vanadium

7440-6-22

.01 - .50

PEL(c) - Vanadium Pentoxide

15 mg/M³- Dust .5 mg/M³
- Fume .1 mg/M³

PHYSICAL DATA

1. BOILING POINT-NA

2. VAPOR PRESSURE-NA

3. VAPOR DENSITY-NA

4. SOLUBILITY IN WATER-NA

5. SPECIFIC GRAVITY-7

6. % VOLATILE BY VOLUME-NA

7. EVAPORATION RATE-NA

8. AUTO IGNITION TEMP.-NA

9. APPEARANCE & ODOR

gray-black & odorless

10. PHYSICAL STATE-SOLID

pH-NA

Coatings: Optional: Trace surface coating of petroleum oil, phosphate or dry lube (borax or lime).

Note: Use gloves to prevent skin irritation

1. FIRST AID:

In case of excessive exposure, remove to fresh air, administer oxygen, and seek physician's assistance.

2. NOTES TO PHYSICIAN:

H. CHEMICAL INGREDIENTS

I. MATERIAL IDENTITY

PERSON, MEDICAL PROCEED

J. PERSON, PROTECTION INFO.

SPECIFIC TYPES & KINDS

1. RESPIRATORY PROTECTION

2. PROTECTIVE CLOTHING

3. GLOVES

4. EYE PROTECTION

5. VENTILATION REQUIREMENTS

6. OTHER-AS PER WELDING REQUIREMENTS

MISHN approved dust/mist/steam respirator II

OSHA PEL is exceeded

Depending on use, consult local state and federal codes for appropriate selection

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NOTE: This document contains information that may be used for the purpose of identifying the following effects if exposures exceed permissible limits. Is as listed Section II.

1-1 MAJOR EXPOSURE HAZARD

☒ INHALATION
 ☐ SKIN CONTACT
 ☐ SKIN ABSORPTION
 ☐ EYE CONTACT
 ☐ INGESTION

Effects of Overexposure —

ACUTE:

Iron (Iron-oxide) - Irritation of eyes, nose, throat, metallic taste in mouth, or metal fume fever.
 Manganese - Irritation of eyes, nose, throat, metallic taste in mouth, or metal fume fever.
 Nickel - Irritation of eyes, nose and lungs; dermatitis.
 Chromium - Irritation of eyes, nose and lungs; dermatitis.
 Molybdenum - Slight irritation of eyes, nose and throat.
 Vanadium - Irritant to conjunctivae and respiratory tract (greenish-black discoloration of tongue and shortness of breath).

CHRONIC:

Iron (Iron-oxide) - Pulmonary effects, siderosis.
 Manganese - Bronchitis, pneumonitis, lack of coordination.
 Nickel - Various forms of dermatitis, inflammation and/or ulceration of upper respiratory tract, and possibly cancer of nasal passages and lungs. Based on available information, there does not appear to be any evidence that exposure to welding fume induces human cancers.
 Chromium - (SAME AS NICKEL)
 Molybdenum - Pain in joints, hands, knees, and feet.
 Vanadium - no reported cases of exposure to vanadium.

VII. FIRE & EXPLOSION HAZARD DATA

1. Flash Point—NA
2. Lower Explosive Limit—NA
3. Upper Explosive Limit—NA
4. Extinguishing Media—NA
5. Special Fire Fighting Precautions—NA

VIII. REACTIVITY DATA

Stable — Yes
 Incompatibility — None
 Products of Decomposition:
 1. Metal fume: Iron oxide,
 2. Chromium, Nickel,
 3. Manganese, Molybdenum,
 4. Vanadium Pentoxide

1. SPECIAL PRECAUTIONS

1. Handling Storage—NA
2. Welding & Cutting—Adequate ventilation and/or approved respiratory protection should be provided if permissible exposure limits are exceeded.
3. Other Precautions—NA

2. SPILL & LEAK PROCEDURE

1. Clean up—NA
2. Waste Disposal—NA