

Ferrochromium, High Carbon



Safety Data Sheet

Section 1: Identification

1.1 Product Identifier

Product Name: Ferrochromium, High Carbon
 Product Form: Solid
 Chemical Family: Metal Alloy
 CAS Number: 11114-46-8 (for Ferrochromium)
 Molecular Formula: See **Section 3.1**.
 Molecular Weight: Varies. See **Section 3.1**.

1.2 Other Means of Identification

Synonyms: DLANA386, Chrome ferroalloy, Carbon ferrochromium, Charge Chrome, Chromium alloy Cr, C, Fe, N, Si

1.3 Recommended Uses

Recommended Use: Raw material for the manufacture of various grades of stainless steel, high chromium casting, and special steel.

1.4 Manufacturer, Importer, or Responsible Party

Responsible Party: Defense Logistics Agency Strategic Materials
 8725 John J. Kingman Road
 Fort Belvoir, Virginia 22060-6223
 (571) 767-5525

1.5 Emergency Phone Number

Emergency Phone Number: (800) 424-9300 (CHEMTREC)
 (703) 527-3887 (CHEMTREC INTERNATIONAL)

Section 2: Hazard(s) Identification

2.1 Classification of Chemical per OSHA CFR 1910.1200

Acute Toxicity (Oral): Category 4
 Skin Irritation: Category 2
 Eye Irritation: Category 2A
 Skin Sensitization: Category 1A
 Respiratory Sensitization: Category 1A
 Germ Cell Mutagenicity: Category 2
 Reproductive Toxicity: Effects on or via Lactation

2.2 Label Elements

Signal Word: DANGER



Symbol(s):

Hazard Statements:

Harmful if swallowed. Causes skin and serious eye irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction. Suspected of causing genetic defects. May cause harm to breast-fed children.

Precautionary Statements:

Prevention: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves, eye protection, and face protection. Wash hands and exposed skin thoroughly after handling. Do not eat, drink, or smoke when using this product. Avoid breathing dusts or mists. In case of inadequate ventilation, wear respiratory protection. Contaminated clothing must not be allowed out of the workplace. Avoid contact during pregnancy and/or while nursing.

Response: If swallowed, call a poison center and/or doctor. Rinse mouth. If on skin, wash with plenty of water. If skin irritation or rash occurs, get medical advice and/or attention. Take off contaminated clothing and wash it before reuse. If in eyes, rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If inhaled and breathing is difficult, remove person to fresh air and keep comfortable for breathing. If eye irritation persists, experiencing respiratory symptoms, or exposed or concerned or feel unwell, get medical advice and/or attention.

Storage: Store locked up.

Disposal: Dispose of contents/container in accordance with local, regional, national, and international regulations.

2.3 Other Hazards

Negligible fire and explosion hazard in bulk form. Dust/air mixtures may ignite or explode.

2.4 Unknown Acute Toxicity

Does not apply to this product.

Section 3: Composition / Information on Ingredients

3.1 Composition

Chemical Name: Ferrochromium, High Carbon
Composition: 64.38%-68.27% Cr

The health and physical hazards information provided in this SDS are for its major component. High Carbon Ferrochromium contains other elements in addition to Cr. For concentrations of other components, see the Certificates of Analysis for each lot.

3.2 Common Names/Synonyms

Synonyms: See **Section 1.2** for common names and synonyms.

3.3 CAS Number/Unique Identifiers

CAS Number: 11114-46-8 (for Ferrochromium)

3.4 Impurities/Stabilizing Additives

No data available.

Section 4: First-Aid Measures

4.1 Description of First-Aid Measures

Format: GHS
Language: English (US)

Revised: April 23, 2015
Version 2

Inhalation:	If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. Get immediate medical attention.
Skin Contact:	Wash skin with soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention, if needed. Thoroughly clean and dry contaminated clothing and shoes before reuse.
Eye Contact:	Flush eyes with plenty of water for at least 15 minutes. Get immediate medical attention.
Ingestion:	If swallowed, get medical attention.

4.2 Most Important Symptoms/Effects, Acute and Delayed

Major Health Hazards: No significant target effects reported.

Inhalation (Acute):	Irritation, Cough.
Inhalation (Chronic):	Irritation, Difficulty Breathing, Lung Damage.
Skin Contact (Acute):	Irritation.
Skin Contact (Chronic):	Irritation, Skin Disorders.
Eye Contact (Acute):	Irritation.
Eye Contact (Chronic):	Irritation.
Ingestion (Acute):	Irritation, Vomiting, Stomach Pain, Dizziness.
Ingestion (Chronic):	No information on significant adverse effects.

4.3 Indication of Immediate Medical Attention/Special Treatment

Get immediate medical attention if inhaled, exposed to eyes, and/or ingested.

Section 5: Fire Fighting Measures

5.1 Suitable Extinguishing Media

Dolomite, dry powder for metal fires, dry sand, graphite, soda ash, and sodium chloride.

5.2 Specific Hazards

Negligible fire and explosion hazard. Dust/air mixtures may ignite or explode.

5.3 Special Protective Equipment and Precautions

Move container from fire area if it can be done without risk. Cool containers with water spray until well after the fire is out. Stay away from the ends of tanks. For fires in cargo or storage area, cool containers with water from unmanned hose holder or monitor nozzles until well after fire is out. If this is impossible then take the following precautions: Keep all unauthorized people away, isolate hazard area, and deny entry. Let the fire burn. Use extinguishing agents appropriate for surrounding fire. Avoid inhalation of material or combustion by-products.

Section 6: Accidental Release Measures

6.1 Personal Precautions, Protective Equipment, and Emergency Procedures

Persons not wearing protective equipment and clothing should be restricted from areas of spills until cleanup has been completed. Subject to California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65). Keep out of water supplies and sewers. Notify Local Emergency Planning Committee and State Emergency Response Commission for release greater than or equal to RQ (U.S. SARA Section 304). If release occurs in the U.S. and is reportable under CERCLA Section 103, notify the National Response Center at (800) 424-8802 (USA) or (202) 426-2675 (USA). Personal protective equipment is discussed in **Section 8.3**.

6.2 Methods and Materials for Containment and Cleaning Up

Collect spilled material in appropriate container for disposal. 1. Remove all ignition sources where metallic chromium has been spilled. 2. Ventilate area of spill. 3. Collect spilled material in the most convenient and safe manner and deposit in sealed containers for reclamation or for disposal in a secured sanitary landfill as a hazardous waste. Liquid containing chromium metal or insoluble chromium salts should be absorbed in vermiculite, dry sand, earth, or a similar material.

Section 7: Handling and Storage

7.1 Precautions for Safe Handling

Handle in accordance with all current regulations and standards. Use methods to minimize dust. Utilize personal protective equipment to avoid contact with skin. Personal protective equipment is discussed in **Section 8.3**.

7.2 Conditions for Safe Storage

Store in accordance with all current regulations and standards. See original container for storage recommendations. Materials which are toxic as stored or which can decompose into toxic components should be stored in a cool, well-ventilated place, out of direct rays of the sun, away from areas of high fire hazard, and should be periodically inspected. Keep separated from incompatible substances. Incompatible materials are identified in **Section 10.5**.

Section 8: Exposure Controls / Personal Protection

8.1 Exposure Limits

Chromium:

OSHA PEL TWA:	1 mg(Cr)/m ³ (metal)
ACGIH TWA:	0.5 mg(Cr)/m ³ (metal)
IDLH:	25 mg(Cr III)/m ³
NIOSH REL TWA (8 hours):	0.5 mg(Cr)/m ³ (metal)
EC OEL TWA (IOELV):	2 mg/m ³ (metal)
UK WEL TWA (8 hours):	0.5 mg/m ³ (metal)

Silicon:

OSHA PEL TWA:	5 mg/m ³ (respirable dust fraction)
OSHA PEL TWA:	15 mg/m ³ (total dust)
OSHA PEL TWA:	10 mg/m ³ (total particulate) (vacated by 58 FR 35338, June 30, 1993)
NIOSH REL TWA (10 hours):	5 mg/m ³ (respirable fraction)
NIOSH REL TWA (10 hours):	10 mg/m ³ (total particulate)
UK WEL TWA:	10 mg/m ³ (total inhalable dust)
UK WEL TWA:	4 mg/m ³ (respirable dust)

Excursion Limit Recommendation: Excursions in worker exposure levels may exceed 3 times the TLV-TWA for no more than a total of 30 minutes during a work day, and under no circumstances should they exceed 5 times the TLV-TWA, provided that the TLV-TWA is not exceeded.

8.2 Appropriate Engineering Controls

Ventilation: Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

8.3 Individual Protection Measures

Eye Protection: Wear splash resistant safety goggles. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

Clothing: Wear appropriate chemical resistant clothing.

Gloves: Wear appropriate chemical resistant gloves.

Respirator: Under conditions of frequent use or heavy exposure, respiratory protection may be needed. Respiratory protection is ranked in order from minimum to maximum. Consider warning properties before use.

2.5 mg/m³: 1. Any quarter-mask respirator.

5 mg/m³: 1. Any particulate respirator equipped with an N95, R95, or P95 filter (including N95, R95, and P95 filtering facepieces) except quarter-mask respirators. The following filters may also be used: N99, R99, P99, N100, R100, or P100.

12.5 mg/m ³ :	<ol style="list-style-type: none"> 2. Any supplied-air respirator.
25 mg/m ³ :	<ol style="list-style-type: none"> 1. Any powered, air-purifying respirator with a high-efficiency particulate filter. 2. Any supplied-air respirator operated in a continuous-flow mode.
250 mg/m ³ :	<ol style="list-style-type: none"> 1. Any powered, air-purifying respirator with a tight-fitting facepiece and a high-efficiency particulate filter. 2. Any air-purifying, full-facepiece respirator with an N100, R100, or P100 filter. 3. Any self-contained breathing apparatus with a full facepiece. 4. Any supplied-air respirator with a full facepiece.
Unknown Concentration/IDLH:	<ol style="list-style-type: none"> 1. Any supplied-air respirator with a full facepiece that is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained breathing apparatus operated in pressure-demand or other positive-pressure mode. 2. Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode.
Escape:	<ol style="list-style-type: none"> 1. Any air-purifying, full-facepiece respirator with an N100, R100, or P100 filter. 2. Any appropriate escape-type, self-contained breathing apparatus.

Section 9: Physical and Chemical Properties

- 9.1 Appearance**
 Physical State: Solid
 Physical Description: Hard, dense lumps.
- 9.2 Odor**
 Not applicable.
- 9.3 Odor Threshold**
 Not available.
- 9.4 pH**
 Not applicable.
- 9.5 Melting/Freezing Points**
 Melting Point: No data available.
 Freezing Point: No data available.
- 9.6 Initial Boiling Point and Boiling Range**
 Not applicable.
- 9.7 Flash Point**
 No data available.
- 9.8 Evaporation Rate**
 Not applicable.
- 9.9 Flammability**
 No data available.
- 9.10 Upper/Lower Explosive Limits**
 No data available.

9.11 Vapor Pressure

Not applicable.

9.12 Vapor Density

Not applicable.

9.13 Relative Density

No data available.

9.14 Solubility(ies)

Insoluble:

Nitric and hydrochloric acid, practically insoluble in water (Si).

Soluble:

Slightly soluble in water (Cr III).

Mixture of nitric and hydrofluoric acids, alkalis, molten alkali oxides (Si)

9.15 Partition Coefficient

No data available.

9.16 Auto-Ignition Temperature

No data available.

9.17 Decomposition Temperature

No data available.

9.18 Viscosity

No data available.

Section 10: Stability and Reactivity

10.1 Reactivity

Stable at normal temperatures and pressures.

10.2 Chemical Stability

Stable at normal temperatures and pressures.

10.3 Possibility of Hazardous ReactionsChromium

Alkali Carbonates:

Attacked.

Alkalies (Caustic):

Attacked.

Ammonium Nitrate (Fused):

Violent or explosive reaction.

Bromine Pentafluoride:

Violent reaction and possible ignition.

Hydrogen Peroxide:

Violent decomposition reaction.

Lithium (Molten):

Vigorous reaction at elevated temperatures.

Nitrogen Oxide:

Incandescent reaction.

Oxidizers (Strong):

Fire and explosion hazard.

Potassium Chlorate (Fused):

Vigorous incandescent reaction.

Sulfur Dioxide:

Incandescent reaction.

Carbon

Alkali Metals:

Contact may result in an exothermic reaction with ignition or an explosion.

Ammonium Nitrate:

Possible explosion when heated.

Ammonium Perchlorate:

Possible explosion on heating.

Bromates:

Contact is likely to result in ignition or an explosion.

Calcium Hypochlorite:

Possible explosion on heating.

Chlorates:

Contact is likely to result in ignition or an explosion.

Chlorine Monoxide:

Explodes.

Chromates:

Incompatible.

Dichlorine Oxide:

Explosion reaction.

Halogens:	Contact of carbon with any halogen is liable to result in ignition or an explosion.
Interhalogens:	Contact of carbon with any interhalogen is liable to result in ignition or an explosion.
Iodates:	Contact is likely to result in ignition or an explosion.
Iodine Pentoxide:	Explodes when warmed.
Metal Nitrates:	Contact is likely to result in ignition or an explosion.
Nitric Acid:	Violent reaction.
Nitrogen Oxide:	Ignition with incandescence.
Nitrogen Trifluoride:	Explosion at reduced temperatures.
Oils (Unsaturated):	Fire and explosion hazard.
Oxides:	Contact with many oxides is likely to result in ignition or an explosion.
Oxidizers (Strong):	Fire and explosion hazard.
Oxosalts:	Contact is likely to result in ignition or an explosion.
Oxygen:	May result in ignition or an explosion.
Oxygen Difluoride:	Possible explosion.
Ozone:	Fire hazard.
Peroxides:	Contact is likely to result in ignition or an explosion.
Peroxyformic Acid:	Violent oxidation.
Peroxyfuroic Acid:	Explosive decomposition.
Potassium Permanganate:	Ignition on heating.
Sodium Sulfide:	May undergo spontaneous heating.
Trioxigen Difluoride:	Ignition with possible explosion.
 <u>Silicon</u>	
Aluminum + Lead Oxide:	Mixture may explode on heating.
Bromine Trifluoride:	Ignition reaction.
Cesium Acetylide:	Vigorous reaction on heating.
Calcium:	Violently incandescent reaction above 1050 C, after a short delay.
Chlorine (Gaseous):	Ignition on contact at ambient temperatures.
Chlorine Trifluoride:	Ignition reaction.
Cobalt Trifluoride:	Exothermic reaction, attaining red heat on warming.
Fluorine:	Ignites at room temperature; attains temperatures above 1,400 °C.
Hydrofluoric Acid:	Attacks silicon.
Hydrofluoric Acid + Nitric Acid Mixture:	Attacks silicon.
Iodine Pentafluoride:	Incandescent reaction.
Iridium Hexafluoride:	During reduction to pentafluoride, hexafluoride must not be condensed directly onto undiluted silicon powder or explosion may occur.
Lead Oxide:	An initiating mixture of silicon and lead dioxide (2:1) attains a temperature around 1,100 °C after ignition by small flame.
Manganese Trifluoride:	Violent reaction.
Metal Carbonates (Alkali):	Exothermic reaction on heating, attaining incandescence and evolving carbon monoxide.
Molybdenum Hexafluoride:	During reduction to pentafluoride, hexafluoride must not be condensed directly onto undiluted silicon powder or explosion may occur.
Nitrosyl Fluoride:	Reacts with incandescence.
Osmium Hexafluoride:	During reduction to pentafluoride, hexafluoride must not be condensed directly onto undiluted silicon powder or explosion may occur.
Oxidizers (Strong):	Fire and explosion hazard.
Oxygen Difluoride:	Generates sparks on heating.
Peroxyformic Acid:	Traces of manganese dioxide may promote oxidation with ignition.
Rhenium Hexafluoride:	During reduction to pentafluoride, hexafluoride must not be condensed directly onto undiluted silicon powder or explosion may occur.
Rubidium Acetylide:	Reacts vigorously on warming.
Silver Fluoride:	Violent reaction.
Sodium-Potassium Alloy:	The reaction forms sodium silicide, which is spontaneously flammable in air.
Uranium Hexafluoride:	During reduction to pentafluoride, hexafluoride must not be condensed directly onto undiluted silicon powder or explosion may occur.
Water:	Combustible or explosive reaction at sufficiently high temperatures and

pressures.

10.4 Conditions to Avoid

None reported.

10.5 Incompatible Materials

Bases, oxidizing materials, halogens, peroxides, metals, combustible materials, acids, reducing agents, metal carbide, and metal salts.

Safe storage of the material is discussed in **Section 7.2**.

10.6 Hazardous Decomposition Products

Thermal Decomposition Products: Miscellaneous Decomposition Products

Section 11: Toxicological Information

11.1 Likely Routes of Exposures

Routes of entry include inhalation, skin contact, eye contact, and ingestion.

11.2 Symptoms

See **Section 4.2** for symptoms related to the physical, chemical, and toxicological characteristics.

11.3 Short and Long Term Effects

Inhalation (Acute):

Chromium:

High concentrations of dusts or fumes may cause irritation.

Carbon:

Inhalation of dust may cause slight mucous membrane irritation.

Silicon:

Dust may cause respiratory and mucous membrane irritation and cough. Intratracheal administration of 25 mg in rabbits produced slight pulmonary lesions.

Inhalation (Chronic):

Chromium:

Repeated or prolonged exposure to various chromium compounds has been reported to result in ulceration and perforation of the nasal septum, irritation of the throat and lower respiratory tract, less commonly in gastrointestinal disturbances, blood changes, pulmonary sensitization, pulmonary pneumoconiosis or fibrosis, and rarely liver effects. These effects have not been reported from exposure to the metal per se.

Carbon:

Repeated or prolonged exposure may cause irritation and pulmonary disorders. Lung damage may result if sufficient exposure occurs.

Silicon:

Inert dust may cause excessive production of mucous, mucous gland hypertrophy, and increased airway resistance and may contribute to chronic bronchitis.

Skin Contact (Acute):

Chromium:

Contact with dusts or powder may cause irritation.

Carbon:

Contact may cause irritation.

Silicon:

May cause mechanical irritation.

Skin Contact (Chronic):

Chromium:

Repeated or prolonged exposure to various chromium compounds has been reported to cause various types of dermatitis, including eczema, "chrome holes", sensitization, and, in contact with damaged skin, kidney damage. These effects have not been reported from exposure to the metal per se.

Carbon:

Repeated or prolonged contact may cause mechanical irritation.

Silicon:

No data available.

Eye Contact (Acute):

Chromium:	Contact with dusts or powders may cause irritation.
Carbon:	Contact with dust may cause mechanical irritation. May also cause conjunctivitis.
Silicon:	Silicon dust may cause irritation.
Eye Contact (Chronic):	
Chromium:	Repeated or prolonged exposure to some chromium compounds may cause conjunctivitis and lacrimation. These effects have not been reported from exposure to the metal per se.
Carbon:	Repeated or prolonged exposure may cause mechanical irritation.
Silicon:	No data available.
Ingestion (Acute):	
Chromium:	Chromium metal is poorly absorbed by the intestinal tract. Absorption of sufficient amounts of some chromium compounds may result in dizziness, intense thirst, abdominal pain, vomiting, shock, oliguria or anuria, and uremia, which may be fatal.
Carbon:	Extremely large doses may produce gastrointestinal disturbances.
Silicon:	May cause digestive tract irritation.
Ingestion (Chronic):	
Chromium:	No data available.
Carbon:	No data available.
Silicon:	No data available.

11.4 Numerical Measures of Toxicity

Chromium:	
Toxicity Data:	27,500 µg/kg unreported-rat LD ₅₀
Mutagenic Data:	DNA damage - human lung 1 µmol/L
Additional Data:	May cross the placenta. May be excreted in breast milk.
Carbon:	
Toxicity Data:	>5 gm/kg oral-rat LD >5 gm/kg intraperitoneal-rat LD >5 gm/kg subcutaneous-rat LD >5 gm/kg oral-mouse LD >5 gm/kg intraperitoneal-mouse LD >5 gm/kg subcutaneous-mouse LD 440 mg/kg intravenous-mouse LD ₅₀ >5 gm/kg oral-dog LD >5 gm/kg intraperitoneal-dog LD >5 gm/kg subcutaneous-dog LD
Reproductive Effects Data:	167 mg/kg subcutaneous-rat TDLo 8 day(s) pregnant female continuous
Silicon:	
Irritation Data:	3 mg eyes-rabbit mild
Toxicity Data:	3,160 mg/kg oral-rat LD ₅₀ 500 mg/kg intraperitoneal-rat LDLo
Acute Toxicity Level:	
Moderately Toxic:	Ingestion
Additional Data:	Nephrotoxicity has been demonstrated with excessive exposure to silicon.
Tumorigenic Data:	2,160 ug/kg intravenous-rat TDLo/6 week(s) intermittent 1,200 ug/kg implant- rat TDLo/6 week(s) intermittent 75 mg/kg implant-rabbit TDLo

11.5 Carcinogen Status

OSHA:	No
NTP:	No
IARC:	Human Inadequate Evidence, Animal Inadequate Evidence, Group 3

Format: GHS
Language: English (US)

Revised: April 23, 2015
Version 2

ACGIH: (Chromium metal)
A4 - Not Classifiable as a Human Carcinogen (Chromium metal)

Section 12: Ecological Information

12.1 Ecotoxicity

Not available.

12.2 Persistence and Degradability

No data available.

12.3 Bioaccumulative Potential

There is little tendency for chromium to accumulate along food chains in the trivalent inorganic form.

12.4 Mobility in Soil

The adsorption of Cr (III) is complicated by redox changes that can occur in soil environments. Organic matter in soils can bring about the spontaneous reduction of Cr (VI) to Cr (III), even under alkaline conditions. The adsorption of Cr (III) increases as pH increases.

12.5 Other Adverse Effects

No data available.

Section 13: Disposal Considerations

Dispose in accordance with all applicable regulations. A solid waste containing chromium may or may not become characterized as a hazardous waste when subjected to the Toxicity Characteristic Leaching Procedure listed in 40 CFR 261.24, and if so characterized, must be managed as a hazardous waste. Generators of waste (equal to or greater than 100 kg/mo) containing this contaminant, EPA hazardous waste number D007, must conform with USEPA regulations in storage, transportation, treatment and disposal of waste.

Section 14: Transport Information

14.1 UN Number

Not applicable.

14.2 UN Proper Shipping Name

Not applicable.

14.3 Transport Hazard Class(es)

U.S. Department of Transportation:	No classification assigned.
CA Transportation/Dangerous Goods:	No classification assigned.
Land Transport ADR:	No classification assigned.
Land Transport RID:	No classification assigned.
Air Transport IATA:	No classification assigned.
Air Transport ICAO:	No classification assigned.
Maritime Transport IMDG:	No classification assigned.

14.4 Packing Group

No classification assigned.

14.5 Environmental Hazards

No data available.

14.6 Transport in Bulk

No data available.

14.7 Special Precautions

Format: GHS
Language: English (US)

Revised: April 23, 2015
Version 2

No data available.

Section 15: Regulatory Information

US Regulations

CERCLA 102A/103 (40 CFR 302.4):

Chromium:	5,000 lbs. RQ (solid metal particles < 100 micrometer diameter (0.004 inches))
Phosphorus, White:	1 lb. RQ
Antimony:	5,000 lbs. RQ (solid metal particles < 100 micrometer diameter (0.004 inches))
Arsenic:	1 lb. RQ (solid metal particles < 100 micrometer diameter (0.004 inches))
Lead:	10 lbs. RQ (solid metal particles < 100 micrometer diameter (0.004 inches))
Zinc:	1,000 lbs. RQ (solid metal particles < 100 micrometer diameter (0.004 inches))

SARA Title III

Section 302 (40 CFR 355.30):	Not regulated.
Section 304 (40 CFR 355.40):	Not regulated.
Sections 311/312 (40 CFR 370.21):	Not regulated.
Section 313 (40 CFR 372.65):	Yes (Chromium)

OSHA Process Safety: Not regulated.

State Regulations

California Proposition 65:	Known to the State of California to cause the following: Arsenic - Cancer (Feb 27, 1987) Lead - Cancer (Oct 01, 1992) Developmental toxicity (Feb 27, 1987) Male reproductive toxicity (Feb 27, 1987) Female reproductive toxicity (Feb 27, 1987)
----------------------------	--

National Inventory Status

U.S. Inventory (TSCA):	Listed on inventory.
TSCA 12(b) Export Notification:	Not listed.

Section 16: Other Information

The information in this Safety Data Sheet meets the requirements of the United States Department of Labor OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION and regulations promulgated thereunder (29 CFR 1910.1200 et. seq.). This document is intended only as a guide to the appropriate precautionary material handling by a person trained in, or supervised by a person trained in, chemical handling. Exposure to this chemical may have serious adverse health effects. This chemical may interact with other substances. Since the potential uses are so varied, all of the potential hazards of use or interaction with other chemicals or materials cannot be identified on this Safety Data Sheet. The user should recognize that this chemical can cause injury, especially if improperly handled, precautionary measures are not followed, and personal protective equipment not worn. Read and understand all precautionary information prior to use. The Defense Logistics Agency (DLA) shall not be held liable for any damage resulting from handling or from contact with the above chemical.

References:

ChemAdvisor, Inc. *Material Safety Data Sheet Product Name: Ferrochromium, High Carbon*. Revised March 13, 2008. (as provided by the Defense Logistics Agency)

American Conference of Governmental Industrial Hygienists. *2013 TLVs® and BEIs®, ACGIH® Publication #0113*. 2013.

US Department of Transportation. *Emergency Response Guidebook*. 2012

Centers for Disease Control and Prevention. *NIOSH Pocket Guide to Chemical Hazards*, <http://www.cdc.gov/niosh/npg/>.

National Institute of Health, Toxicology Data Network. <http://toxnet.nlm.nih.gov/>

NOTE: No data available: no data for this topic found using references listed.

Date of Preparation of Updated SDS: April 23, 2015