Material Safety Data Sheet.
Nickel Alloys

**Section 2 - Hazardous Ingredients / Identity Information Product Identification**

*Note: Products under normal conditions do not represent inhalation, ingestion, or contact Health Hazard*

<table>
<thead>
<tr>
<th>Ingredient (1)</th>
<th>CAS No.</th>
<th>Wt. % (2)</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum (Al)</td>
<td>7249-90-5</td>
<td>5</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Carbon (C)</td>
<td>7440-44-0</td>
<td>Not established</td>
<td>Not established</td>
<td></td>
</tr>
<tr>
<td>Chromium (Cr)</td>
<td>7440-47-3</td>
<td>10-27</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Cobalt (Co)</td>
<td>7440-48-4</td>
<td>.01-.75</td>
<td>0.1</td>
<td>0.02</td>
</tr>
<tr>
<td>Copper (Cu)</td>
<td>7440-50-8</td>
<td>.18-4.5</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Iron (Fe)</td>
<td>7439-89-6</td>
<td>Balance</td>
<td>Not established</td>
<td>Not established</td>
</tr>
<tr>
<td>Iron oxide</td>
<td>1309-37-1</td>
<td>10</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Manganese (Mn)</td>
<td>7439-98-5</td>
<td>2-10</td>
<td>15</td>
<td>10</td>
</tr>
<tr>
<td>Nickel (Ni)</td>
<td>7440-02-0</td>
<td>.12-34</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Nitrogen (N)</td>
<td>7727-37-9</td>
<td>.01-.06</td>
<td>Not established</td>
<td>Not established</td>
</tr>
<tr>
<td>Nitric oxide</td>
<td>10102-43-9</td>
<td>25 ppm, 30</td>
<td>25 ppm, 31</td>
<td></td>
</tr>
<tr>
<td>Nitrogen dioxide</td>
<td>10102-44-0</td>
<td>5 ppm, 9 ceiling</td>
<td>3 ppm, 5.6</td>
<td></td>
</tr>
<tr>
<td>Oil Mist, mineral</td>
<td>8012-95-1</td>
<td>5</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Oxygen (O)</td>
<td>7782-44-7</td>
<td>Not established</td>
<td>Not established</td>
<td></td>
</tr>
<tr>
<td>Phosphorous (P)</td>
<td>7723-14-0</td>
<td>.01-.06</td>
<td>0.1</td>
<td>0.1</td>
</tr>
<tr>
<td>Selenium (Se)</td>
<td>7782-49-2</td>
<td>.01-.3</td>
<td>0.2</td>
<td>0.2</td>
</tr>
<tr>
<td>Silicon (Si)</td>
<td>7440-21-3</td>
<td>.15-2.0</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Sulfur (S)</td>
<td>7440-34-9</td>
<td>.01-.06</td>
<td>Not established</td>
<td></td>
</tr>
<tr>
<td>Tantalum (Ta)</td>
<td>1314-61-0</td>
<td>0.1-.1</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Titanium (Ti)</td>
<td>13463-67-7</td>
<td>.01-.70</td>
<td>Not established</td>
<td>10</td>
</tr>
</tbody>
</table>

**Note:** The above listing is a summary of elements used in alloying nickel alloys. Various grades will contain different combinations of these elements. Other trace elements may also be present in minute amounts. Values shown are applicable to component elements.
Section 3 - Physical Data

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material Is (normal conditions)</td>
<td>Solid</td>
</tr>
<tr>
<td>Appearance and Color</td>
<td>Silver-Metallic, Odorless</td>
</tr>
<tr>
<td>Melting Point (Base Metal)</td>
<td>2400-2800 F</td>
</tr>
<tr>
<td>Boiling Point (Base Metal)</td>
<td>N/A</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>N/A</td>
</tr>
<tr>
<td>Specific Gravity (H_2O=1)</td>
<td>~6</td>
</tr>
<tr>
<td>Vapor Pressure (mm Hg)</td>
<td>N/A</td>
</tr>
<tr>
<td>Vapor Density (Air =1)</td>
<td>N/A</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Section 4 - Fire and Explosion Hazard Data

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash Point</td>
<td>N/A</td>
</tr>
<tr>
<td>Flammable Limits</td>
<td>N/A</td>
</tr>
<tr>
<td>LEL:</td>
<td>N/A</td>
</tr>
<tr>
<td>UEL:</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Extinguishing Media:
Dry powdered dolomite, dry sand or dry graphite; DO NOT USE water on molten metal.

Special Fire Fighting Procedures:
Use self-contained NIOSH breathing apparatus in pressure and demand mode.

Unusual Fire and Explosion Hazards:
DO NOT USE water on molten metal. Use coarse water spray on chips, turnings, etc. DO NOT USE halogenated extinguishing agents on small chips or fines.

Additional Information:
Arc or spark generated when welding or burning could be a source of ignition for combustion and flammable materials. Dust clouds may be explosive: prevent formation. Molten aluminum may also react violently with rust and certain metal oxides (i.e. Cu, Fe, Pb).

Section 5 - Reactivity Data

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incompatibility (Materials to Avoid):</td>
<td>Halogenated acids &amp; solvents, bromates, iodates, aluminum nitrate.</td>
</tr>
<tr>
<td>Hazardous Polymerization</td>
<td>Will not Occur</td>
</tr>
<tr>
<td>Conditions to Avoid</td>
<td>Aluminum particles coming into contact with copper, lead or iron oxides can react vigorously if source of ignition or intense heat.</td>
</tr>
</tbody>
</table>

Section 6 - Health Hazard Data

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Route(s) of Entry</td>
<td>Inhalation: Yes, Skin Contact: Yes, Eye Contact: Yes, Ingestion: No</td>
</tr>
<tr>
<td>Health Hazards</td>
<td>Acute: Excess exposure to all metallic fumes and dusts may result in irritation of eyes nose and throat. Also high concentrations of fumes and dusts of iron-oxide, manganese and copper may result in metal fume fever. Chronic: Chronic and prolonged inhalation of high concentrations of fumes or dust of the following elements may lead to the conditions listed opposite the element:</td>
</tr>
</tbody>
</table>

Aluminum
May initiate fibrotic changes to lung tissue, irritation of the eyes, nose and throat. Particles Al deposited in the eye may cause irreversible tissue damage of the cornea. Al salts may cause dermatitis, eczema, conjunctivitis and irritation of the mucus membranes of the upper respiratory tract. Long-term inhalation exposure to Al dusts or fumes has been associated with a fibrotic lung condition known as Shaver's disease. Al dust/fines and fumes are a low health risk by inhalation. For standard operations (milling, cutting, grinding), aluminum dust should be treated as a nuisance dust as defined by the ACGIH. Welding aluminum, plasma arc cutting, and arc spray metalizing can generate ozone. Excessive exposure to aluminum fume and dust has been associated with lung disease, but this effect is probably due to simultaneous silica exposure.
Carcinogenicity: N/A NTP? No IARC? A4* OSHA Regulated? No *(for aluminum oxide)

Carbon
Elemental carbon, as it exists in this product, is of very low toxicity; no chronic debilitating symptoms indicated. Health hazard data presented here is based on exposures to carbon black, not carbon as it is found in this product. Chronic inhalation exposure to carbon black may result in temporary or permanent damage to lungs and heart. Pneumoconiosis has been found in workers engaged in the production of carbon black. Skin conditions such as inflammation of the hair follicles, and oral mucosal lesions have also been reported from skin exposure.
Carcinogenicity: N/A NTP? No IARC? A4* OSHA Regulated? No *(for carbon black)

Chromium
Cr fumes and dusts can cause sensitization dermatitis, inflammation and/or ulceration of upper respiratory tract, lesions of the skin and mucus membranes, and possibly cancer of the nasal passages or lungs-bronchogenic carcinoma.
Carcinogenicity: N/A NTP? No IARC? A4 OSHA Regulated? No
<table>
<thead>
<tr>
<th>Substance</th>
<th>Carcinogenicity</th>
<th>NTP?</th>
<th>IARC?</th>
<th>OSHA Regulated?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead chromate</td>
<td>Yes</td>
<td>NTP?</td>
<td>A2</td>
<td>OSHA Regulated?</td>
</tr>
<tr>
<td>Manganese</td>
<td>No</td>
<td>NTP?</td>
<td>No</td>
<td>OSHA Regulated?</td>
</tr>
<tr>
<td>Copper</td>
<td>A3</td>
<td>NTP?</td>
<td>A3</td>
<td>OSHA Regulated?</td>
</tr>
<tr>
<td>Iron</td>
<td>No</td>
<td>NTP?</td>
<td>No</td>
<td>OSHA Regulated?</td>
</tr>
<tr>
<td>Iron oxide dust or fumes</td>
<td>No</td>
<td>NTP?</td>
<td>No</td>
<td>OSHA Regulated?</td>
</tr>
</tbody>
</table>

**Hexavalent Chromium (Chrome VI)**

Chrome VI can cause asthma, kidney damage, primary irritant dermatitis, sensitization dermatitis, skin ulceration, and pulmonary edema (fluid in the lungs). Chronic inhalation or overexposure has been associated with lung, nasal, and gastrointestinal cancer. Hexavalent chromium is listed as carcinogenic to humans by IARC. Chromium and some of its compounds are listed as carcinogenic by the NTP.

Inhalation of **Co dust** may cause an asthma-like disease with cough and dyspnea, respiratory tract irritation and hypersensitization dermatitis. Chronic overexposure to Co dust and fume may result in polythemia, hyperplasia of bone marrow and thyroid gland, pericardial effusion and damage to pancreas alpha cells. Animal studies have shown that particulate is an acutely irritating substance and industrial exposures, possibly combined with small amounts of silica, are reported capable of producing serious pneumoconiosis which is initially of an insidious nature.

**Carcinogenicity:** N/A  
**NTP?** No  
**IARC?** A1  
**OSHA Regulated?** No

**Copper**

No chronic debilitating symptoms indicated. Inhalation of **Cu dust, fumes or mists** may cause irritation of the eyes, nose and throat and a flu-like illness called metal fume fever. Early symptoms of metal fume fever include a metallic or sweet taste in the mouth, dryness and irritation of the throat and coughing. These symptoms may progress to shortness of breath, headache, fever, chills, muscle aches, nausea, vomiting, weakness, fatigue and profuse sweating. The attack may last 6-48 hours and is more likely to occur after a period away from the job. Chronic overexposure to copper fumes may result in blood disorders (anemia). Repeated or prolonged exposure to Cu fumes may cause discoloration of hair, hands, and soles of the feet (keratinization).

**Carcinogenicity:** N/A  
**NTP?** No  
**IARC?** No  
**OSHA Regulated?** No

**Iron**

No chronic debilitating symptoms indicated. Subjecting Fe and alloys containing Fe to high temperatures (such as occurs during welding) will cause the formation of iron oxide. High exposures to iron oxide can cause x-ray changes (siderosis or iron pigmentation) in the lungs as a result of long-term exposure. Siderosis is a benign condition and is not associated with pulmonary fibrosis (scarring of the lung). Ingestion of high levels of iron oxide can cause gastrointestinal irritation, bleeding and systemic toxicity.

**Carcinogenicity:** N/A  
**NTP?** No  
**IARC?** A4*  
**OSHA Regulated?** No

*For iron oxide*

**Lead**

Lead is an accumulated poison. Inhalation effects of exposure to fumes or dust of inorganic lead may not develop quickly. Symptoms may include decreased physical fitness, fatigue, sleep disturbance, headache, aching bones and muscles, constipation, abdominal pains and decreasing appetite. The effects are reversible and complete recovery is possible. Inhalation of large amounts of lead may lead to seizures, coma and death. Chronic or acute inhalation exposures to the fumes or dusts of inorganic lead compounds (such as lead oxide) can adversely affect several organ systems including the nervous system, the gastrointestinal system, the hematological system and renal system. The early effects are characterized by fatigue, constipation, muscle aches, abdominal pains, and decreased appetite. Later signs and symptoms can include anemia, pallor, a "lead Line" on the gums, and reduced hand-grip strength. Lead colic produces intense abdominal cramping which can be accompanied by constipation, nausea, and vomiting. A condition called "wrist drop" can develop if the peripheral nervous system is affected. Severe central nervous system effects (referred to as lead encephalopathy) usually only occur after heavy and rapid lead exposures. Signs and symptoms may include headache, dizziness, convulsions, delirium, coma, and possibly death. Long-term exposures can also produce kidney damage with possible decreased renal function leading to such conditions called stannosis. Alcohol ingestion and physical exertion may bring on symptoms. Continued exposure can result in decreased fertility and/or increased chances of miscarriage or birth defects. Lead inorganic dust and fume is listed as possibly carcinogenic by IARC.

**Carcinogenicity:** N/A  
**NTP?** No  
**IARC?** A3  
**OSHA Regulated?** No

**Manganese**

Mn intoxication is usually due to the oxide or salts of Mn, elemental Mn exhibits very low toxicity. Manganese oxide fumes can act as minor irritants to the eyes and respiratory tract and metal fume fever. Both acute and chronic exposures may adversely affect the central nervous system (manganeseism), pneumonitis (inflammation of lung tissue), and may cause fibrosis (scarring of lung tissue), and reproductive disorders (impotence) in males. Early symptoms may include weakness in lower extremities, sleepiness, salivation, nervousness and apathy. Bronchitis, pneumonitis, lack of coordination resembling Parkinson’s disease (apathy, weakness, etc.). The central nervous system is the chief site of the injury, and there may be adverse blood and kidney effects. Chronic manganese poisoning is not a fatal disease although it is extremely disabling. Some individuals may be hypersusceptible to manganese. Freshly formed manganese fume has caused fever and chills similar to metal fume fever.

**Carcinogenicity:** N/A  
**NTP?** No  
**IARC?** No  
**OSHA Regulated?** No
<table>
<thead>
<tr>
<th>Element</th>
<th>Description</th>
<th>Carcinogenicity: N/A</th>
<th>NTP?</th>
<th>IARC?</th>
<th>OSHA Regulated?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphorous</td>
<td>Dust of metallic Mo has caused difficulty breathing, general weakness, pain in chest, joints, hands and feet, expectoration, fatigue, headache, anorexia, possible liver and kidney damage and bone deformity. Mo has caused anemia and poor growth in experimental animals. Mo may also cause pneumoconiosis and irritation to lungs and eyes. In rats, dusts of metallic Mo have caused growth depression and thickening of intraalveolar septa, which contained connective tissue fibers.</td>
<td>N/A</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Nickel</td>
<td>Skin contact with nickel and its compounds may cause allergic dermatitis. The resulting skin rash is often referred to as “nickel itch,” which usually occurs when the skin is moist. Ni metal is listed as a possibly carcinogenic to humans by IARC. Ni fumes and dusts can cause skin sensitization and allergic contact dermatitis. Ni and its compounds may also produce eye irritation, particularly on the inner surfaces of the eyelids (i.e. the conjunctiva). Chronic inhalation of high levels of Ni can cause irritation of airways and lungs, lung fibrosis (scarring of the lungs), nasal septum perforation, nasal sinusitis, respiratory sensitization and asthma. Ni compounds have caused cancer of the lungs, larynx, and paranasal sinuses in lab animals.</td>
<td>Yes</td>
<td>NTP?</td>
<td>No</td>
<td>OSHA Regulated?</td>
</tr>
<tr>
<td>Oxygen</td>
<td>Oxygen can cause irritation of the eyes, skin (when moist), and upper respiratory tract. Exposure to high levels of nitrogen oxides can cause delayed pulmonary edema (fluid in the lungs) which may be fatal. Nitric oxide can cause formation of methemoglobin which decreases the blood’s ability to carry oxygen. Chronic overexposure can cause pulmonary fibrosis (scarring of the lungs).</td>
<td>N/A</td>
<td>NTP?</td>
<td>No</td>
<td>OSHA Regulated?</td>
</tr>
<tr>
<td>Ozone</td>
<td>Overexposure to ozone can result in mucus membrane and respiratory tract irritation. Severe overexposures can cause pulmonary edema (fluid in the lungs).</td>
<td>N/A</td>
<td>NTP?</td>
<td>No</td>
<td>OSHA Regulated?</td>
</tr>
<tr>
<td>Phosphorous</td>
<td>Chronic and prolonged inhalation of high concentrations of fumes or dust may cause necrosis of the mandible.</td>
<td>N/A</td>
<td>NTP?</td>
<td>No</td>
<td>OSHA Regulated?</td>
</tr>
<tr>
<td>Selenium</td>
<td>Chronic inhalation of high concentrations of fumes and dust are associated with accumulation of fluid in the lungs, garlic breath, bronchitis, pneumonitis, bronchial asthma, nausea, chills, fever, headache, sore throat, shortness of breath, conjunctivitis, vomiting, abdominal pain, diarrhea and enlarged liver. Selenium is an eye and upper respiratory irritant and a sensitizer. Overexposure may result in red staining of the nails, teeth and hair. Selenium dioxide reacts with moisture to form selenious acid which is corrosive to the skin and eyes.</td>
<td>N/A</td>
<td>NTP?</td>
<td>No</td>
<td>OSHA Regulated?</td>
</tr>
<tr>
<td>Silicon</td>
<td>No chronic debilitating symptoms indicated. Chronic exposure to inert dusts of silicon can cause increased airways resistance and contribute to chronic bronchitis. Accumulation in lungs may be responsible for benign pneumoniosis, but is not considered to be responsible for pulmonary functional impairment or respiratory symptoms. Intracheal administration of silicon in rabbits produced significant pulmonary lesions.</td>
<td>N/A</td>
<td>NTP?</td>
<td>No</td>
<td>OSHA Regulated?</td>
</tr>
<tr>
<td>Sulfur</td>
<td>Chronic and prolonged inhalation of high concentrations of fumes or dust, as sulfur dioxide, may lead to edema of the lungs. <em>(for sulfur dioxide)</em></td>
<td>N/A</td>
<td>NTP?</td>
<td>No</td>
<td>OSHA Regulated?</td>
</tr>
<tr>
<td>Tantalum</td>
<td>No chronic debilitating symptoms indicated.</td>
<td>N/A</td>
<td>NTP?</td>
<td>No</td>
<td>OSHA Regulated?</td>
</tr>
</tbody>
</table>
Additional Information:

Aluminum dust/fines and fumes are low health risk by inhalation. For standard operations (i.e. machining, cutting, grinding), aluminum should be treated as a nuisance dust and is so defined by the American Conference of Government Industrial Hygienists (ACGIH).

In welding, precautions should be taken for airborne contaminants which may originate from components of the welding rod. Recent epidemiological studies of workers melting and working alloys containing nickel and chromium have found no increased risk of cancer. Chromium and nickel and their components are listed in the 3rd Annual Report on carcinogens, as prepared by the National Toxicology Program (NTP) and by the International Agency for Research on Cancer (IARC).

Welding of aluminum alloys may generate carbon monoxide, carbon dioxide, ozone nitrogen oxides, infrared radiation and ultraviolet radiation.

Since lead is a cumulative toxic metal by inhalation or ingestion, appropriate industrial precautions to guard against these two routes of exposure need to be taken when handling these alloys. Sampling to establish the lead level exposure to airborne particulate or fumes is possible. Consult OSHA Lead standard 29 CFR 1910.1025 for specific health/industrial hygiene precautions and requirements to follow when handling lead compounds.

NTP (National Toxicology Program) Classifications:

Group 1: Known to be carcinogenic; sufficient evidence from human studies.
Group 2: Reasonably anticipated to be a carcinogen; limited evidence from studies in humans or sufficient evidence from studies in experimental animals.

IARC (International Agency for Research on Cancer) Classifications:

Group A1 - Confirmed Human Carcinogen: The agent is carcinogenic to humans based on the weight of evidence from epidemiologic studies and/or convincing clinical evidence in, exposed humans.

Group A2 - Suspected Human Carcinogen: The agent is carcinogenic in experimental animals at dose levels, by route(s) of administration, at site(s), of histologic type(s), or by mechanism(s) that are considered relevant to worker exposure. Available epidemiologic studies are conflicting or insufficient to confirm an increased risk of cancer in exposed humans.

Group A3 - Animal Carcinogen: The agent is carcinogenic in experimental animals at dose levels, by route(s) of administration, at site(s), of histologic type(s), or by mechanism(s) that are not relevant to worker exposure. Available epidemiologic studies do not confirm an increased risk of cancer in exposed humans. Available evidence suggests that the agent is not likely to cause cancer in humans except under uncommon or unlikely routes or levels of exposure.

Group A4 - Not Classifiable as a Human Carcinogen: There are inadequate data on which to classify the agent in terms of its carcinogenicity in humans and/or animals.

Group A5 - Not Suspected as a Human Carcinogen: The agent is not suspected to be a human carcinogen on the basis of properly conducted epidemiologic studies in humans.

Signs and Symptoms of Exposure:

Typical symptoms consist of a metallic taste in the mouth, dryness of the throat, chills, fever and influenza-like symptoms, usually lasting from 12 to 48 hours.
Medical Conditions Generally Aggravated by Exposure:
Individuals with chronic respiratory disorders (i.e. asthma, chronic bronchitis, emphysema, etc.) may be adversely affected by fume or airborne particulate matter exposure.

Emergency and First Aid Procedures:
Inhalation: Remove to fresh air; if condition continues, consult a physician.
Eye Contact: Flush thoroughly with running water for 15 minutes to remove particulate; take care to rinse under eyelids. Obtain medical attention.
Skin Contact: Remove particulate by washing thoroughly with soap and water. Seek medical attention if condition persists. For minor burns, apply cold water. For severe burns, seek immediate medical attention.
Ingestion: Does not represent a hazard, if significant amounts of metal are ingested, consult physician.

Section 7 - Precautions for Safe Handling and Use
Steps to be taken in Case Material Is Released or Spilled:
Fine turnings and small chips should be swept or vacuumed. Scrap metal can be reclaimed for re-use.

Waste Disposal Method:
Used or unused product should be tested to determine hazard status and disposal requirements under federal, state or local laws and regulations.

Precautions to Be Taken in Handling and Storing:
See Section 4.

Other Precautions:
Not requested by USA Department of Transportation.

Section 8 - Control Measures
Respiratory Protection:
Appropriate dust/mist/fume respirator should be used to avoid excessive inhalation of particulates. If exposure limits are reached or exceeded, use NIOSH/MSHA approved equipment.

Ventilation:
Use with adequate ventilation to meet exposure limits listed in Section 2.

Eye Protection:
Safety glasses/face shields should be worn when grinding, cutting, or welding.

Protective Gloves:
Should be worn as required for welding, burning or handing operations.

Other Protective Clothing/Equipment:
As required depending on operations and safety codes.

Work / Hygienic Practices:
Wash with soap and water.

Disclaimer
The information in this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any representation or warranty, express or implied regarding the accuracy or correctness.

The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product.

This document has been prepared solely for the intent of compliance with the provisions of Subpart 2 of Part 1910 of title 29 of the Code of Federal Regulations, paragraph 1910.1200.

Footnotes:
(1) Common names if applicable, appear in parentheses following the chemical names.
(2) Concentrations may vary somewhat between batches or lots. Where possible, a concentration range is indicated. Occasionally, however, levels may even fall outside of the usual concentration ranges.
(3) All values, unless otherwise specified, refer to 8-hour time-weighted average concentrations and units are in mg/M3.