

Section 1 - Product and Company Identification

Material Name	<ul style="list-style-type: none">▪ Novamet® Stainless Steel Flake (Fine Leafing, Standard Leafing, Fine Water and Standard Water Grades)
Product Description	<ul style="list-style-type: none">▪ Shiny metallic flake, odorless.
Product Use	<ul style="list-style-type: none">▪ Powder Coatings. Automotive trim, wheels and under-the-hood parts, office and outdoor furniture, bicycles. Architectural Coatings. Provides a stainless steel look to masonry and exposed metal. Maintenance Coatings. Corrosion protection for food processing plants, transmission towers and equipment exposed to extreme elements. Cookware Coatings. Promotes abrasion resistance and heat transfer in non-stick coatings.
Manufacturer	<ul style="list-style-type: none">▪ Novamet Specialty Products Corporation 681 Lawlins Road Wyckoff, NJ 07481 United States
Telephone	
General	<ul style="list-style-type: none">▪ 201-891-7676
<u>Emergency</u>	<ul style="list-style-type: none">▪ 800-424-9300 - CHEMTREC
Preparation Date	<ul style="list-style-type: none">▪ 3/8/2011
Last Revision Date	<ul style="list-style-type: none">▪ 3/8/2011

Section 2 - Hazards Identification

Emergency Overview

WARNING

May cause an allergic skin reaction. Causes damage to organs - Lungs through prolonged or repeated exposure via Inhalation. Suspected of causing cancer. May cause long lasting harmful effects to aquatic life.

Prevention	Do not breathe dust, fume, gas, mist, vapours and/or spray. Do not eat, drink or smoke when using this product. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Contaminated work clothing should not be allowed out of the workplace. Wash thoroughly after handling. Use personal protective equipment as required. Wear protective gloves, clothing, and eye/face protection. Avoid release to the environment.
Response	IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse. IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician.
Storage/Disposal	Store locked up. Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.



May form combustible dust concentrations in air (during processing).

Physical Form

Color

Odor

OSHA

WHMIS

- Solid
- Shiny metallic.
- Odorless
- Irritant, Carcinogen
- Class D - Poisonous and Infectious Materials - Division 2 - Subdivision A, Class D - Poisonous and Infectious Materials - Division 2 - Subdivision B



EU

- Toxic - T, Carcinogenic Substances - Category 3 - Carc.Cat.3
R40, R43, R48/23



GHS

- Chronic Hazards to the aquatic environment - Category 4, Specific Target Organ Toxicity Repeated Exposure - Category 1, Skin Sensitizer - Category 1, Carcinogenicity - Category 2

Route Of Entry

Target Organs

Medical Conditions

Aggravated by Exposure

- Inhalation, Skin, Eye, Ingestion/Oral
- Lungs
- Lungs, Skin

NFPA:



Potential Health Effects

Inhalation

Acute (Immediate)

Chronic (Delayed)

- May cause respiratory irritation.
- Repeated or prolonged inhalation of iron particles can cause siderosis.

Skin

Acute (Immediate)

Chronic (Delayed)

- May cause skin sensitization. Symptoms include redness, and skin rash.
- No data available.

Eye

Acute (Immediate)

Chronic (Delayed)

- May cause irritation.
- No data available.

Ingestion

Acute (Immediate)

Chronic (Delayed)

- Under normal conditions of use, no health effects are expected.
- No data available.

Carcinogenic Effects

- The International Agency for Research on Cancer (IARC) found there was inadequate evidence that metallic nickel is carcinogenic to humans but since there was sufficient evidence that it is carcinogenic to animals, IARC concluded that metallic nickel is possibly carcinogenic to humans. Epidemiological studies of workers exposed to nickel powder and to dust and fume generated in the production of nickel alloys and of stainless steel have not indicated the presence of a significant respiratory cancer hazard. The inhalation of nickel powder has not resulted in an increased incidence of malignant lung tumours in rodents.

Carcinogenic Effects			
	CAS	IARC	NTP
Nickel	7440-02-0	Group 2B-Possible Carcinogen	Reasonably Anticipated to be Human Carcinogen

Reproductive Effects

- Ingestion of molybdenum has caused developmental abnormalities in animal studies.

Potential Environmental Effects

- Nickel powder may cause longterm harmful effects to the aquatic environment.

See Section 12 for Ecological Information.

Section 3 - Composition/Information on Ingredients

Hazardous Components						
Chemical Name	CAS	%(weight)	UN;EINECS	LD50/LC50	EU Classification & R Phrases	Other
Iron	7439-89-6	69%	231-096-4	Ingestion/Oral-Human LD50 · 200 mg/kg	NDA	NDA
Chromium	7440-47-3	17%	231-157-5	NDA	NDA	NDA
Nickel	7440-02-0	12%	231-111-4	NDA	Carc.Cat.3; R40 R43 T; R48/23	Carc. 2; STOT RE 1; Skin Sens. 1; Aquatic Chronic 3;
Molybdenum	7439-98-7	2%	231-107-2	NDA	NDA	Eye Irrit. 2A; Skin Irrit. 2; STOT RE 2; STOT SE 3; *

Under United States Regulations (29 CFR 1900.1200 - Hazard Communication Standard), this product is considered hazardous. In Canada, the product mentioned above is considered hazardous under the Workplace Hazardous Materials Information System (WHMIS). According to European Directive 1999/45/EC this preparation is considered dangerous. According to Regulation (EC) No. 1272/2008 (CLP) this material is considered hazardous. According to the Globally Harmonized Standard for Classification and Labeling (GHS) this product is considered hazardous.

Key to abbreviations

* = Self Classified

See Section 11 for Toxicological Information.

Section 4 - First Aid Measures

Inhalation

- Move victim to fresh air. Administer oxygen if breathing is difficult. Give artificial respiration if victim is not breathing.

Skin

- IF ON SKIN: Wash with plenty of soap and water. If symptoms of sensitization occur seek medical attention.

Eye

- In case of contact with substance, immediately flush eyes with running water for at least 20 minutes.

Ingestion

- Rinse mouth. Do not give anything by mouth to an unconscious person.

See Section 2 for Potential Health Effects.

Section 5 - Fire Fighting Measures

Extinguishing Media

- LARGE FIRE: Water spray, fog or regular foam.
SMALL FIRES: Dry chemical, CO₂, water spray or regular foam.

Unsuitable Extinguishing Media

- No data available.

Firefighting Procedures

- LARGE FIRES: Move containers from fire area if you can do it without risk.
LARGE FIRES: Do not scatter spilled material with high pressure water streams.
LARGE FIRES: Dike fire-control water for later disposal.
Keep unauthorized personnel away.
Stay upwind.

Unusual Fire and Explosion Hazards

- Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. Metal flake heat treated in reducing atmospheres may become spontaneously combustible.

Hazardous Combustion Products

- No data available.

Protection of Firefighters

- Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only provide limited protection.

Section 6 - Accidental Release Measures

Personal Precautions

- Do not touch or walk through spilled material.

Emergency Procedures

- As an immediate precautionary measure, isolate spill or leak area for at least 25 meters (75 feet) in all directions. If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions. Keep unauthorized personnel away.

Environmental Precautions Containment/Clean-up Measures

- LARGE SPILLS: Prevent entry into waterways, sewers, basements or confined areas.
Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Use clean nonsparking tools to collect material. SMALL DRY SPILLS: With clean shovel place material into clean, dry container and cover loosely; move containers from spill area.
LARGE SPILLS: Cover powder spill with plastic sheet or tarp to minimize spreading.

Prohibited Materials

- No data available

Section 7 - Handling and Storage

Handling

- Avoid prolonged and repeated skin contact. Do not breathe (dust, vapor or spray mist) Use only with adequate ventilation. Wear appropriate respirator if handling is likely to cause the concentration of airborne nickel to exceed the locally prescribed exposure limits. Keep container closed when not in use. Minimize dust generation and accumulation. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces.

Storage

- Ventilate enclosed areas. Keep container closed. Do not store near acids, reactive substances, ammonium nitrate, perchlorates or phosphorus. Store locked up.

Special Packaging Materials

- No data available

Incompatible Materials or Ignition Sources

- Acids, ammonium nitrate, perchlorates and phosphorus.

Section 8 - Exposure Controls/Personal Protection

Personal Protective Equipment

Pictograms



Respiratory

- For prolonged exposure use an air-purifying respirator with high efficiency particulate air (HEPA) filters. Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or symptoms are experienced.

Eye/Face

- Wear safety glasses.

Hands

- Wear appropriate gloves.

Skin/Body

- Wear long sleeves and/or protective coveralls.

General Industrial Hygiene Considerations

- Wash hands before eating.

Engineering Measures/Controls

- Adequate ventilation systems as needed to control concentrations of airborne contaminants below applicable threshold limit values. Ensure that dust handling systems (such as exhaust ducts, dust collectors, vessels and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is not leakage from the equipment). It is recommended that dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen-deficient environment.

Exposure Limits/Guidelines						
	Result	ACGIH	Australia	Canada Ontario	Canada Quebec	China
Molybdenum (7439-98-7)	TWAs	10 mg/m ³ TWA (inhalable fraction); 3 mg/m ³ TWA (respirable fraction)	10 mg/m ³ TWA (as Mo)	10 mg/m ³ TWAEV (metal, inhalable); 3 mg/m ³ TWAEV (metal, respirable)	Not established	6 mg/m ³ TWA
	STELs	Not established	Not established	Not established	Not established	15 mg/m ³ STEL
Nickel (7440-02-0)	TWAs	1.5 mg/m ³ TWA (inhalable fraction)	1 mg/m ³ TWA	1 mg/m ³ TWAEV (inhalable)	1 mg/m ³ TWAEV	1 mg/m ³ TWA
	STELs	Not established	Not established	Not established	Not established	2.5 mg/m ³ STEL
Chromium (7440-47-3)	TWAs	0.5 mg/m ³ TWA	0.5 mg/m ³ TWA	0.5 mg/m ³ TWAEV	0.5 mg/m ³ TWAEV	0.05 mg/m ³ TWA
	STELs	Not established	Not established	Not established	Not established	0.15 mg/m ³ STEL
Exposure Limits/Guidelines (Con't.)						
	Result	China Highly Toxic Goods	Europe	France	Germany TRGS	Ireland
Nickel (7440-02-0)	TWAs	1 mg/m ³ TWA	Not established	1 mg/m ³ VME; 1 mg/m ³ VME (metal gratings)	Not established	0.5 mg/m ³ TWA
	STELs	2.5 mg/m ³ STEL	Not established	Not established	Not established	Not established
Chromium (7440-47-3)	TWAs	0.15 mg/m ³ TWA	2 mg/m ³ TWA	2 mg/m ³ VME (indicative limit)	2 mg/m ³ TWA (inhalable fraction, exposure factor 1)	0.5 mg/m ³ TWA
	Ceilings	0.05 mg/m ³ Ceiling	Not established	Not established	Not established	Not established
Exposure Limits/Guidelines (Con't.)						
	Result	Israel	Japan	Korea	Mexico	New Zealand
Molybdenum (7439-98-7)	TWAs	10 mg/m ³ TWA (inhalable fraction); 3 mg/m ³ TWA (respirable fraction)	Not established	10 mg/m ³ TWA	Not established	10 mg/m ³ TWA
Nickel (7440-02-0)	TWAs	1.5 mg/m ³ TWA (inhalable fraction)	1 mg/m ³ OEL	1 mg/m ³ TWA	1 mg/m ³ TWA	1 mg/m ³ TWA

Chromium (7440-47-3)	TWAs	0.5 mg/m3 TWA	0.5 mg/m3 OEL	0.5 mg/m3 TWA	0.5 mg/m3 TWA	0.5 mg/m3 TWA
Exposure Limits/Guidelines (Con't.)						
	Result	NIOSH	OSHA	Russia	Singapore	Spain
Molybdenum (7439-98-7)	STELs	Not established	Not established	3 mg/m3 STEL (aerosol)	Not established	Not established
	TWAs	Not established	Not established	0.5 mg/m3 TWA (aerosol)	10 mg/m3 PEL	Not established
Nickel (7440-02-0)	TWAs	0.015 mg/m3 TWA	1 mg/m3 TWA	Not established	1 mg/m3 PEL	1 mg/m3 VLA-ED
Chromium (7440-47-3)	TWAs	0.5 mg/m3 TWA	1 mg/m3 TWA	Not established	0.5 mg/m3 PEL	2 mg/m3 VLA-ED (indicative limit value, total dust)
Iron (7439-89-6)	TWAs	Not established	Not established	10 mg/m3 TWA (aerosol)	Not established	Not established

Exposure Limits/Guidelines (Con't.)				
	Result	Sweden	Switzerland	Taiwan
Molybdenum (7439-98-7)	MAKs	Not established	10 mg/m3 MAK (inhalable)	Not established
	TWAs	10 mg/m3 LLV (total dust); 5 mg/m3 LLV (respirable dust)	Not established	Not established
Nickel (7440-02-0)	MAKs	Not established	0.5 mg/m3 MAK (inhalable)	Not established
	TWAs	0.5 mg/m3 LLV (total dust)	Not established	1 mg/m3 TWA
Chromium (7440-47-3)	MAKs	Not established	0.5 mg/m3 MAK (as Cr, inhalable)	Not established
	TWAs	0.005 mg/m3 LLV (total dust)	Not established	1 mg/m3 TWA

Exposure Control Notations

Australia

▪Nickel (7440-02-0): **Sensitizers:** (sensitiser)

Japan

▪Chromium (7440-47-3): **Sensitizers:** (Group 2 airway sensitizer; Group 1 skin sensitizer) | **Sensitizers:** (Group 2 airway sensitizer (Evaluation does not necessarily apply to all individuals within the group); Group 1 skin sensitizer (Evaluation does not necessarily apply to all individuals within the group))

▪Nickel (7440-02-0): **Carcinogens:** (Group 2B - Possibly Carcinogenic to Humans (metal)) | **Carcinogens:** (Group 1 - Carcinogenic to Humans (except Ni metal, Evaluation does not necessarily apply to all individuals within the group)) | **Sensitizers:** (Group 2 airway sensitizer; Group 1 skin sensitizer)

Mexico

▪Chromium (7440-47-3): **Carcinogens:** (A4 - Not classifiable as a human carcinogen)

Russia

▪Nickel (7440-02-0): **Carcinogens:** (Carcinogen) | **Sensitizers:** (Allergenic substance)

ACGIH

▪Chromium (7440-47-3): **Carcinogens:** (A4 - Not Classifiable as a Human Carcinogen)

▪Nickel (7440-02-0): **Carcinogens:** (A5 - Not Suspected as a Human Carcinogen)

Germany DFG

▪Nickel (7440-02-0): **Carcinogens:** (Category 1 (causes cancer in man)) | **Carcinogens:** (Category 1 (causes cancer in man)) | **Sensitizers:** (respiratory and skin sensitizer) | **Sensitizers:** (respiratory and skin sensitizer)

Exposure Limits Supplemental

Israel

Component Name	Concentration	CAS	Data
Iron	69%	7439-89-6	Acute Toxicity: orl-hmn LD50:200 mg/kg; ihl-rat TCLo:150 mg/m3/4H/78W-I
Nickel	12%	7440-02-0	Acute Toxicity: orl-rat TDLo:200 mg/kg; ihl-rbt TCLo:130 ug/m3/6H/35W-I; ihl-rat TCLo:0.5 mg/m3/24H/13W-C; ihl-rat TCLo:0.4 mg/m3/40W-I; Reproductive: orl-rat TDLo:158 mg/kg (multigenerations)
Molybdenum	2%	7439-98-7	Acute Toxicity: orl-rat TDLo:7 mg/kg/2W-I; Mutagen: cyt-rat-ihl 19500 ug/m3; Reproductive: orl-rat TDLo:5800 ug/kg (30W pre/1-20D preg)

Key to abbreviations

TC = Toxic Concentration

TD = Toxic Dose

LD = Lethal Dose

Section 12 - Ecological Information

Component Name	Concentration	CAS	Data
Nickel	12%	7440-02-0	Crustacea: 48 Hour(s) EC50 Water Flea 1000 µg/L

- Ecological Fate** ▪ No data available.
- Persistence/Degradability** ▪ No data available.
- Bioaccumulation Potential** ▪ No data available.
- Mobility in Soil** ▪ No data available.
- Other Information** ▪ May cause long-term adverse effects in the aquatic environment.

Section 13 - Disposal Considerations

- Product** ▪ Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 14 - Transportation Information

DOT - United States - Department of Transportation

Shipping Name: Not Regulated

TDG - Canada - Transport of Dangerous Goods

Shipping Name: Not Regulated

IMO/IMDG –International Maritime Transport

Shipping Name: Not Regulated

ADN - Europe Transport of Dangerous Goods by Road/Inland Waterway

Shipping Name: Not Regulated

IATA - International Air Transport Association

Shipping Name: Not Regulated

ADR - Europe Transport of Dangerous Goods by Road/Inland Waterway

Shipping Name: Not Regulated

RID - Europe Transport of Dangerous Goods by Railways

Shipping Name: Not Regulated

Section 15 - Regulatory Information

- SARA Hazard Classifications** ▪ Acute
- Risk & Safety Phrases** ▪ R40 Limited evidence of a carcinogenic effect.
 R43 May cause sensitisation by skin contact.
 R48/23 Toxic: danger of serious damage to health by prolonged exposure through inhalation.
 S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
 S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
 S61 Avoid release to the environment. Refer to special instructions/ Safety Data Sheets.

State Right To Know				
Component	CAS	MA	NJ	PA
Iron	7439-89-6	No	No	Yes
Chromium	7440-47-3	Yes	Yes	Yes
			Yes	Yes
Nickel	7440-02-0	Yes	Yes	Yes
			Yes	Yes
Molybdenum	7439-98-7	Yes	Yes	Yes

Inventory						
Component	CAS	Canada DSL	Canada NDSL	China	EU EINECS	EU ELNICS
Iron	7439-89-6	Yes	No	Yes	Yes	No
Chromium	7440-47-3	Yes	No	Yes	Yes	No
Nickel	7440-02-0	Yes	No	Yes	Yes	No
Molybdenum	7439-98-7	Yes	No	Yes	Yes	No

Inventory (Con't.)				
Component	CAS	Japan ENCS	Korea KECL	TSCA
Iron	7439-89-6	No	Yes	Yes
Chromium	7440-47-3	No	Yes	Yes
Nickel	7440-02-0	No	Yes	Yes
Molybdenum	7439-98-7	No	Yes	Yes

Australia

Labor

Australia - Hazardous Substances - Substances Requiring Health Surveillance

- Chromium 7440-47-3 17% Not Listed
- Molybdenum 7439-98-7 2% Not Listed
- Nickel 7440-02-0 12% Not Listed
- Iron 7439-89-6 69% Not Listed

Australia - High Volume Industrial Chemicals List

- Chromium 7440-47-3 17% Not Listed
- Molybdenum 7439-98-7 2% Not Listed
- Nickel 7440-02-0 12%
- Iron 7439-89-6 69%

Australia - List of Designated Hazardous Substances - Classification

- Chromium 7440-47-3 17% Self classification required
- Molybdenum 7439-98-7 2% Self classification required
- Nickel 7440-02-0 12% T Carc.Cat.3 R40, R48/23, R43
- Iron 7439-89-6 69% Not Listed

Environment

Australia - National Pollutant Inventory (NPI) Substance List

- Chromium 7440-47-3 17% Not Listed
- Molybdenum 7439-98-7 2% Not Listed
- Nickel 7440-02-0 12% (Nickel and compounds); 60000 MWH Threshold category 2b (Nickel and compounds); 20 MW Threshold category 2b (Nickel and compounds)
- Iron 7439-89-6 69% Not Listed

Australia - Ozone Protection Act - Scheduled Substances

- Chromium 7440-47-3 17% Not Listed
- Molybdenum 7439-98-7 2% Not Listed
- Nickel 7440-02-0 12% Not Listed
- Iron 7439-89-6 69% Not Listed

Australia - Priority Existing Chemical Program

- Chromium 7440-47-3 17% Not Listed
- Molybdenum 7439-98-7 2% Not Listed
- Nickel 7440-02-0 12% Standby chemical
- Iron 7439-89-6 69% Not Listed

Canada

Labor

Canada - WHMIS - Classifications of Substances

- Chromium 7440-47-3 17% Uncontrolled product according to WHMIS classification criteria
- Molybdenum 7439-98-7 2% Uncontrolled product according to WHMIS classification criteria
- Nickel 7440-02-0 12% D2A, D2B; B6, D2A (Raney)
- Iron 7439-89-6 69% Uncontrolled product according to WHMIS classification criteria

Canada - WHMIS - Ingredient Disclosure List

- Chromium 7440-47-3 17% 0.1 %
- Molybdenum 7439-98-7 2% 1 %
- Nickel 7440-02-0 12% 0.1 %

- Iron 7439-89-6 69% Not Listed

Environment

Canada - CEPA - Priority Substances List

- Chromium 7440-47-3 17% Not Listed
- Molybdenum 7439-98-7 2% Not Listed
- Nickel 7440-02-0 12% Not Listed
- Iron 7439-89-6 69% Not Listed

Europe

Environment

EU - Seveso II Directive (96/82/EC) - Qualifying Quantities for Major Accident Notification

- Chromium 7440-47-3 17% Not Listed
- Molybdenum 7439-98-7 2% Not Listed
- Nickel 7440-02-0 12% Not Listed
- Iron 7439-89-6 69% Not Listed

EU - Seveso II Directive (96/82/EC) - Qualifying Quantities for Safety Report Requirements

- Chromium 7440-47-3 17% Not Listed
- Molybdenum 7439-98-7 2% Not Listed
- Nickel 7440-02-0 12% Not Listed
- Iron 7439-89-6 69% Not Listed

Other

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Classification

- Chromium 7440-47-3 17% Not Listed
- Molybdenum 7439-98-7 2% Not Listed
- Nickel 7440-02-0 12% Carc.Cat.3; R40 R43 T; R48/23
- Iron 7439-89-6 69% Not Listed

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Concentration Limits

- Chromium 7440-47-3 17% Not Listed
- Molybdenum 7439-98-7 2% Not Listed
- Nickel 7440-02-0 12% Not Listed
- Iron 7439-89-6 69% Not Listed

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Labelling

- Chromium 7440-47-3 17% Not Listed
- Molybdenum 7439-98-7 2% Not Listed
- Nickel 7440-02-0 12% T R:40-43-48/23 S:(2)-36/37/39-45
- Iron 7439-89-6 69% Not Listed

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Notes - Substances and Preparations

- Chromium 7440-47-3 17% Not Listed
- Molybdenum 7439-98-7 2% Not Listed
- Nickel 7440-02-0 12% S, 7
- Iron 7439-89-6 69% Not Listed

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Safety Phrases

- Chromium 7440-47-3 17% Not Listed
- Molybdenum 7439-98-7 2% Not Listed
- Nickel 7440-02-0 12% S:(2)-36/37/39-45
- Iron 7439-89-6 69% Not Listed

Germany

Environment

Germany - Water Classification (VwVwS) - Annex 1

- Chromium 7440-47-3 17% ID Number 1443, not considered hazardous to water
- Molybdenum 7439-98-7 2% ID Number 1443, not considered hazardous to water
- Nickel 7440-02-0 12% Not Listed
- Iron 7439-89-6 69% ID Number 748, not considered hazardous to water

Germany - Water Classification (VwVwS) - Annex 2 - Water Hazard Classes

- Chromium 7440-47-3 17% Not Listed
- Molybdenum 7439-98-7 2% Not Listed
- Nickel 7440-02-0 12% Number 7182, hazard class 2 - hazard to waters (footnote 47)
- Iron 7439-89-6 69% Not Listed

Germany - Water Classification (VwVwS) - Annex 3

- Chromium 7440-47-3 17% Not Listed
- Molybdenum 7439-98-7 2% Not Listed
- Nickel 7440-02-0 12% ID Number 7616, hazard class 2 - hazard to waters (particle size <0.1 mm)
- Iron 7439-89-6 69% Not Listed

Hong Kong

Labor

Hong Kong - Dangerous Substances Regulations - Classification

- Chromium 7440-47-3 17% Not Listed
- Molybdenum 7439-98-7 2% Not Listed
- Nickel 7440-02-0 12% Not Listed
- Iron 7439-89-6 69% Not Listed

Other

Hong Kong - Controlled Carcinogens

- Chromium 7440-47-3 17% Not Listed
- Molybdenum 7439-98-7 2% Not Listed
- Nickel 7440-02-0 12% Not Listed
- Iron 7439-89-6 69% Not Listed

India

Environment

India - Hazardous Chemical Rules - List of Hazardous and Toxic Chemicals

- Chromium 7440-47-3 17% (powder)
- Molybdenum 7439-98-7 2% (powder)
- Nickel 7440-02-0 12% (powder)
- Iron 7439-89-6 69% Not Listed

Mexico

Other

Mexico - Hazard Classifications

- Chromium 7440-47-3 17% Not Listed
- Molybdenum 7439-98-7 2% Not Listed
- Nickel 7440-02-0 12% Not Listed
- Iron 7439-89-6 69% Not Listed

Mexico - Regulated Substances

- Chromium 7440-47-3 17% Not Listed
- Molybdenum 7439-98-7 2% Not Listed
- Nickel 7440-02-0 12% Not Listed
- Iron 7439-89-6 69% Not Listed

Russia

Labor

Russia - Limiting Quantities of Hazardous Substances

- Chromium 7440-47-3 17% Not Listed
- Molybdenum 7439-98-7 2% Not Listed
- Nickel 7440-02-0 12% Not Listed
- Iron 7439-89-6 69% Not Listed

Taiwan

Environment

Taiwan - Toxic Chemical Substances Control Act - Threshold Regulated Quantities

- Chromium 7440-47-3 17% Not Listed
- Molybdenum 7439-98-7 2% Not Listed
- Nickel 7440-02-0 12% Not Listed
- Iron 7439-89-6 69% Not Listed

Taiwan - Toxic Chemical Substances Control Act - Classification and Control Levels

- Chromium 7440-47-3 17% Not Listed
- Molybdenum 7439-98-7 2% Not Listed
- Nickel 7440-02-0 12% Not Listed
- Iron 7439-89-6 69% Not Listed

United States

Labor

U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals

- Chromium 7440-47-3 17% Not Listed
- Molybdenum 7439-98-7 2% Not Listed
- Nickel 7440-02-0 12% Not Listed
- Iron 7439-89-6 69% Not Listed

U.S. - OSHA - Specifically Regulated Chemicals

- Chromium 7440-47-3 17% Not Listed
- Molybdenum 7439-98-7 2% Not Listed
- Nickel 7440-02-0 12% Not Listed
- Iron 7439-89-6 69% Not Listed

Environment

U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants

- Chromium 7440-47-3 17% Not Listed
- Molybdenum 7439-98-7 2% Not Listed
- Nickel 7440-02-0 12% Not Listed
- Iron 7439-89-6 69% Not Listed

U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities

5000 lb final RQ (no reporting of releases of this hazardous substance is required if the diameter of the

- Chromium 7440-47-3 17% pieces of the solid metal released is larger than 100 micrometers); 2270 kg final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is larger than 100 micrometers)
- Molybdenum 7439-98-7 2% Not Listed
100 lb final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is larger than 100 micrometers); 45.4 kg final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is larger than 100 micrometers)
- Nickel 7440-02-0 12% releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is larger than 100 micrometers)
- Iron 7439-89-6 69% Not Listed

U.S. - CERCLA/SARA - Section 313 - Emission Reporting

- Chromium 7440-47-3 17% 1.0 % de minimis concentration
- Molybdenum 7439-98-7 2% Not Listed
- Nickel 7440-02-0 12% 0.1 % de minimis concentration
- Iron 7439-89-6 69% Not Listed

U.S. - RCRA (Resource Conservation & Recovery Act) - Basis for Listing - Appendix VII

- Chromium 7440-47-3 17% Included in waste streams: F032, F034, F035, F037, F038, F039, K090, K091
- Molybdenum 7439-98-7 2% Not Listed
- Nickel 7440-02-0 12% Included in waste streams: F006, F039
- Iron 7439-89-6 69% Not Listed

U.S. - RCRA (Resource Conservation & Recovery Act) - Constituents for Detection Monitoring

- Chromium 7440-47-3 17% (total)
- Molybdenum 7439-98-7 2% Not Listed
- Nickel 7440-02-0 12% (total)
- Iron 7439-89-6 69% Not Listed

U.S. - RCRA (Resource Conservation & Recovery Act) - D Series Wastes - Max Conc of Contaminants for the Tox Characteristic

- Chromium 7440-47-3 17% 5.0 mg/L regulatory level
- Molybdenum 7439-98-7 2% Not Listed
- Nickel 7440-02-0 12% Not Listed
- Iron 7439-89-6 69% Not Listed

U.S. - RCRA (Resource Conservation & Recovery Act) - Hazardous Constituents - Appendix VIII to 40 CFR 261

- Chromium 7440-47-3 17% hazardous constituent - no waste number
- Molybdenum 7439-98-7 2% Not Listed
- Nickel 7440-02-0 12% hazardous constituent - no waste number
- Iron 7439-89-6 69% Not Listed

U.S. - RCRA (Resource Conservation & Recovery Act) - List for Hazardous Constituents

- Chromium 7440-47-3 17% (total)
- Molybdenum 7439-98-7 2% Not Listed
- Nickel 7440-02-0 12% (total)
- Iron 7439-89-6 69% Not Listed

U.S. - RCRA (Resource Conservation & Recovery Act) - Phase 4 LDR Rule - Universal Treatment Standards

- Chromium 7440-47-3 17% 2.77 mg/L (total, wastewater); 0.60 mg/L TCLP (total, nonwastewater)
- Molybdenum 7439-98-7 2% Not Listed
- Nickel 7440-02-0 12% 3.98 mg/L (wastewater); 11.0 mg/L TCLP (nonwastewater)
- Iron 7439-89-6 69% Not Listed

U.S. - RCRA (Resource Conservation & Recovery Act) - TSD Facilities Ground Water Monitoring

- Chromium 7440-47-3 17% (total)
- Molybdenum 7439-98-7 2% Not Listed

- Nickel 7440-02-0 12% (total)
- Iron 7439-89-6 69% Not Listed

United States - California

Environment

U.S. - California - Proposition 65 - Carcinogens List

- Chromium 7440-47-3 17% Not Listed
- Molybdenum 7439-98-7 2% Not Listed
- Nickel 7440-02-0 12% carcinogen, initial date 10/1/89
- Iron 7439-89-6 69% Not Listed

U.S. - California - Proposition 65 - Developmental Toxicity

- Chromium 7440-47-3 17% Not Listed
- Molybdenum 7439-98-7 2% Not Listed
- Nickel 7440-02-0 12% Not Listed
- Iron 7439-89-6 69% Not Listed

U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)

- Chromium 7440-47-3 17% Not Listed
- Molybdenum 7439-98-7 2% Not Listed
- Nickel 7440-02-0 12% Not Listed
- Iron 7439-89-6 69% Not Listed

U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)

- Chromium 7440-47-3 17% Not Listed
- Molybdenum 7439-98-7 2% Not Listed
- Nickel 7440-02-0 12% Not Listed
- Iron 7439-89-6 69% Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Female

- Chromium 7440-47-3 17% Not Listed
- Molybdenum 7439-98-7 2% Not Listed
- Nickel 7440-02-0 12% Not Listed
- Iron 7439-89-6 69% Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Male

- Chromium 7440-47-3 17% Not Listed
- Molybdenum 7439-98-7 2% Not Listed
- Nickel 7440-02-0 12% Not Listed
- Iron 7439-89-6 69% Not Listed

United States - Pennsylvania

Labor

U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List

- Chromium 7440-47-3 17%
- Molybdenum 7439-98-7 2% Not Listed
- Nickel 7440-02-0 12%
- Iron 7439-89-6 69% Not Listed

U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances

- Chromium 7440-47-3 17%
- Molybdenum 7439-98-7 2% Not Listed
- Nickel 7440-02-0 12%

