

Section 1 - Product and Company Identification

Material Name	▪ Novamet Stainless Steel Flake Type SSC
Product Description	▪ Metallic paste, kerosene-like odor.
Product Use	▪ Maintenance Coatings. Corrosion protection for food processing plants, transmission towers and equipment exposed to extreme elements.
Manufacturer	▪ Novamet Specialty Products Corporation 681 Lawlins Road Wyckoff, NJ 07481 United States
Telephone	
General	▪ 201-891-7676
<u>Emergency</u>	▪ 800-424-9300 - CHEMTREC
Preparation Date	▪ 3/8/2011
Last Revision Date	▪ 3/8/2011

Section 2 - Hazards Identification

Emergency Overview

DANGER

Flammable liquid and vapour. Harmful to aquatic life. Harmful to aquatic life with long lasting effects. Causes damage to organs - Lungs through prolonged or repeated exposure via Inhalation. May cause an allergic skin reaction. May be fatal if swallowed and enters airways. Suspected of causing cancer.

Prevention Keep away from heat, sparks, open flames and/or hot surfaces. - No smoking. Use only non-sparking tools. Take precautionary measures against static discharge. Keep cool. Ground and/or bond container and receiving equipment. Use explosion -proof - electrical, ventilating and/or lighting equipment. Keep container tightly closed. Avoid release to the environment. Obtain special instructions before use. Contaminated work clothing should not be allowed out of the workplace. 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. Use personal protective equipment as required. Wear protective gloves, clothing, and eye/face protection. Wash thoroughly after handling.

Response In case of fire: Use appropriate media CO2, dry chemical, or foam for extinction. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice/attention. IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting. Get medical advice/attention if you feel unwell.

Storage/Disposal Store in a well-ventilated place. Keep cool. Store locked up. Dispose of content and/or container in

accordance with local, regional, national, and/or international regulations.



Physical Form

Color

Odor

Flash Point

OSHA

WHMIS

- Liquid
- Metallic
- Kerosene-like odor.
- ≥ 40 C (≥ 104 F)
- Combustible Liquid, Flammable/Combustible - Class II, Irritant, Carcinogen
- Class B - Flammable and Combustible Materials - Division 3, Class D - Poisonous and Infectious Materials - Division 2 - Subdivision A, Class D - Poisonous and Infectious Materials - Division 2 - Subdivision B



EU

- Harmful - Xn, Toxic - T, Sensitizer - , Carcinogenic Substances - Category 3 - Carc.Cat.3
- R10, R52, R53, R65, R40, R43, R48/23



GHS

- Flammable Liquids - Category 3, Acute Hazards to the aquatic environment - Category 3, Chronic Hazards to the aquatic environment - Category 3, Specific Target Organ Toxicity Repeated Exposure - Category 1, Skin Sensitizer - Category 1, Aspiration - Category 1, Carcinogenicity - Category 2

Route Of Entry

Target Organs

Medical Conditions

Aggravated by Exposure

- Inhalation
- Lungs, Central Nervous System (CNS)
- Disorders of the lungs, Skin

NFPA:



Potential Health Effects

Inhalation

Acute (Immediate)

- Inhalation of mineral spirits vapors at concentrations above the PEL may cause CNS effects with symptoms of lightheadedness, dizziness, breathing difficulties and unconsciousness.

Chronic (Delayed)

- If flake is allowed to dry thoroughly repeated and prolonged inhalation of nickel particles may cause chronic lung inflammation and lung fibrosis.

Skin

Acute (Immediate)

- May cause skin sensitization. Symptoms include redness, and skin rash.

Chronic (Delayed)

- Repeated and prolonged exposure to nickel can cause a type of dermatitis specifically referred to as "nickel" itch.

Eye

Acute (Immediate)

- Mineral spirits may cause eye irritation.

Chronic (Delayed)

- No data available.

Ingestion

Acute (Immediate)

- May be harmful if swallowed. During ingestion mineral spirits can be aspirated into the lungs causing effects ranging from widespread lung inflammation and pulmonary edema to death.

Chronic (Delayed)

- 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

Potential Environmental Effects

- Harmful to the aquatic environment. May cause long lasting harmful effects to aquatic life.

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
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;
Mineral Spirits	64742-47-8	10%	265-149-8	NDA	Xn; R65	Asp. Tox. 1; Aquatic Acute 2*; Aquatic Chronic 2*;

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. Give artificial respiration if victim is not breathing. Administer oxygen if breathing is difficult.

Skin

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

- Eye**
 - In case of contact with substance, immediately flush eyes with running water for at least 20 minutes.
- Ingestion**
 - If swallowed, do not induce vomiting; seek medical advice immediately and show this container or label. 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**
 - SMALL FIRES: Dry chemical, CO₂, water spray or regular foam.
 - LARGE FIRE: Water spray, fog 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**
 - Mineral spirits is a combustible liquid. 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.
- Flash Point**
 - >= 40 C(>= 104 F)

Section 6 - Accidental Release Measures

- Personal Precautions**
 - Do not touch or walk through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate enclosed areas.
- Emergency Procedures**
 - ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area) As an immediate precautionary measure, isolate spill or leak area for at least 25 meters (75 feet) in all directions. Keep unauthorized personnel away.
- Environmental Precautions**
 - LARGE SPILLS: Prevent entry into waterways, sewers, basements or confined areas.
- Containment/Clean-up Measures**
 - Use dry earth, sand or other non-combustible material to collect free mineral spirits. Scoop or shovel up the bulk of the spilled flake paste. Collect the remainder by using sweeping compound. Do not vacuum paste containing mineral spirits. If the flake is allowed to dry thoroughly, vacuum with the vacuum exhaust passing through a high efficiency particulate arresting (HEPA) filter if the exhaust is discharged into the workplace. Avoid generating dust.
 - All equipment used when handling the product must be grounded.
- Prohibited Materials**
 - No data available.

Section 7 - Handling and Storage

- Handling**
 - Keep away from fire - No Smoking. Keep away from heat and sparks. Keep container closed when not in use. Wear suitable protective clothing, including gloves. Avoid prolonged and repeated skin contact. Do not inhale flake. Launder clothing and gloves as needed. Wash thoroughly after use. Emptied containers retain product residue, follow label warnings even after container is emptied. Do not cut, drill, grind or weld on or near the container.
- Storage**
 - Store in a well-ventilated place. Keep container tightly closed. Do not store near acids, bases, strong oxidizing agents or selected amines. Keep product containers cool, dry and away from sources of ignition. Store locked up.
- Special Packaging Materials**
 - No data available.
- Incompatible Materials or Ignition Sources**
 - Acids, ammonium nitrate, perchlorates, phosphorous, selenium and sulfur.

Section 8 - Exposure Controls/Personal Protection

Personal Protective Equipment

Pictograms



Respiratory

- In case of insufficient ventilation, wear suitable respiratory equipment. 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

- Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco.

Engineering Measures/Controls

- Use only with adequate ventilation to keep exposures (airborne levels of dust, fume, vapor etc) below recommended exposure limits.

Exposure Limits/Guidelines

	Result	ACGIH	Australia	Canada Ontario	Canada Quebec	China
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
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/m ³ TWA	0.5 mg/m ³ OEL	0.5 mg/m ³ TWA	0.5 mg/m ³ TWA	0.5 mg/m ³ TWA

Exposure Limits/Guidelines (Con't.)

	Result	NIOSH	OSHA	Singapore	Spain	Sweden
Nickel (7440-02-0)	TWAs	0.015 mg/m ³ TWA	1 mg/m ³ TWA	1 mg/m ³ PEL	1 mg/m ³ VLA-ED	0.5 mg/m ³ LLV (total dust)
Chromium (7440-47-3)	TWAs	0.5 mg/m ³ TWA	1 mg/m ³ TWA	0.5 mg/m ³ PEL	2 mg/m ³ VLA-ED (indicative limit value, total dust)	0.005 mg/m ³ LLV (total dust)

Exposure Limits/Guidelines (Con't.)

	Result	Switzerland	Taiwan
Nickel (7440-02-0)	MAKs	0.5 mg/m ³ MAK (inhalable)	Not established
	TWAs	Not established	1 mg/m ³ TWA
Chromium (7440-47-3)	MAKs	0.5 mg/m ³ MAK (as Cr, inhalable)	Not established
	TWAs	Not established	1 mg/m ³ 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

▪Nickel (7440-02-0): **Biological Markers of Occupational Exposure:** (15 µg/L Medium: urine)

ACGIH

▪Chromium (7440-47-3): **TLV Basis - Critical Effects:** (skin and upper respiratory tract irritation)

▪Nickel (7440-02-0): **TLV Basis - Critical Effects:** (dermatitis; pneumoconiosis)

Key to abbreviations

ACGIH = American Conference of Governmental Industrial Hygiene

MSHA = Mine Safety and Health Administration

NIOSH = National Institute of Occupational Safety and Health

OSHA = Occupational Safety and Health Administration

TWA = Time-Weighted Averages are based on 8h/day, 40h/week exposures

TWAEV = Time-Weighted Average Exposure Value

STEL = Short Term Exposure Limits are based on 15-minute exposures

VME = Valeur Moyenne d'Exposition is the maximum permissible concentration for a work day

OEL = Occupational Exposure Limit

PEL = Permissible Exposure Level determined by the Occupational Safety and Health Administration (OSHA)

VLA-ED = Valor Límite Ambiental Exposición Diaria is the limit for the daily average concentration

LLV = Limit Level Value is the exposure limit for 8-hour work day

MAK = Maximale Arbeitsplatz Konzentration is the maximum permissible concentration

Section 9 - Physical and Chemical Properties

Physical Form

- Liquid

Appearance/Description

- Metallic paste, kerosene-like odor.

Color : Metallic	Odor : Kerosene-like odor.
Taste : NDA	Odor Threshold : NDA

Boiling Point:	NDA	Vapor Pressure:	NDA
Melting Point:	NDA	Vapor Density:	NDA
Specific Gravity:	NDA	Evaporation Rate:	NDA
Density:	NDA	VOC (Wt.):	NDA
Bulk Density:	0.4 to 2.3 g/cm ³	VOC (Vol.):	NDA
pH:	NDA	Volatiles (Wt.):	NDA
Water Solubility:	NDA	Volatiles (Vol.):	NDA
Solvent Solubility:	NDA	Flash Point:	>= 40 C(>= 104 F)
Viscosity:	NDA	Flash Point Test Type:	NDA
Half-Life:	NDA	UEL:	NDA
Octanol/Water Partition coefficient:	NDA	LEL:	NDA
Coefficient of water/oil distribution:	NDA	Autoignition:	NDA
Bioaccumulation Factor:	NDA	Bioconcentration Factor:	NDA
Biochemical Oxygen Demand BOD/BOD5:	NDA	Chemical Oxygen Demand:	NDA
Persistence:	NDA	Degradation:	NDA

Section 10 - Stability and Reactivity

Stability

- Stable under normal temperatures and pressures.

Hazardous Polymerization Conditions to Avoid

- Hazardous polymerization not indicated.
- Heat spark, open flame and incompatible materials. Metal flake heat treated in reducing atmospheres may become spontaneously combustible. Under special conditions nickel can react with carbon monoxide in reducing atmospheres to form nickel carbonyl, Ni(CO)₄, a toxic gas.

Incompatible Materials

- Like other metals, this product can react with acids to liberate hydrogen gas which can form explosive mixtures in air. Metal flake can react explosively or incandescently with substances such as ammonium nitrate, perchlorates, phosphorus, selenium and sulfur.

Hazardous Decomposition Products

- Mineral spirits can thermally decompose in the presence of air to form carbon monoxide and/or carbon dioxide.

Section 11 - Toxicological Information

Component Name	Concentration	CAS	Data
Chromium	17%	7440-47-3	Acute Toxicity: unr-rat LD50:27500 ug/kg; Mutagen: dnd-hmn:lng 1 umol/L; dnd-hmn:lym 5 umol/L/1H
Nickel	12%	7440-02-0	Acute Toxicity: orl-rat TDLo:200 mg/kg; ihl-rbt TCLo:130 ug/m ³ /6H/35W-I; ihl-rat TCLo:0.5 mg/m ³ /24H/13W-C; ihl-rat TCLo:0.4 mg/m ³ /40W-I; Reproductive: orl-rat TDLo:158 mg/kg (multigenerations)

Key to abbreviations

TC = Toxic Concentration

TD = Toxic Dose

unr = Unreported

Section 12 - Ecological Information

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

Mineral Spirits	10%	64742-47-8	Fish: 96 Hour(s) Fish 2900 µg/L
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- 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 acute and long term hazards to 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, Chronic
- Risk & Safety Phrases** ▪ R10 Flammable.
R52 Harmful to aquatic organisms.
R53 May cause long-term adverse effects in the aquatic environment.
R65 Harmful: may cause lung damage if swallowed.
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.
S23 Do not breathe gas/fumes/vapour/spray.
S24 Avoid contact with skin.
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).
 S62 If swallowed, do not induce vomiting. Seek medical advice immediately and show the container or label.
 S61 Avoid release to the environment. Refer to special instructions/ Safety Data Sheets.

State Right To Know				
Component	CAS	MA	NJ	PA
Chromium	7440-47-3	Yes	Yes	Yes
			Yes	Yes
Nickel	7440-02-0	Yes	Yes	Yes
			Yes	Yes
Mineral Spirits	64742-47-8	No	No	No

Inventory						
Component	CAS	Canada DSL	Canada NDSL	China	EU EINECS	EU ELNICS
Chromium	7440-47-3	Yes	No	Yes	Yes	No
Nickel	7440-02-0	Yes	No	Yes	Yes	No
Mineral Spirits	64742-47-8	Yes	No	Yes	Yes	No

Inventory (Con't.)				
Component	CAS	Japan ENCS	Korea KECL	TSCA
Chromium	7440-47-3	No	Yes	Yes
Nickel	7440-02-0	No	Yes	Yes
Mineral Spirits	64742-47-8	Yes	Yes	Yes

Australia

Labor

Australia - High Volume Industrial Chemicals List

- Mineral Spirits 64742-47-8 10%
- Chromium 7440-47-3 17% Not Listed
- Nickel 7440-02-0 12%

Australia - List of Designated Hazardous Substances - Classification

- Mineral Spirits 64742-47-8 10% Xn R65
- Chromium 7440-47-3 17% Self classification required
- Nickel 7440-02-0 12% T Carc.Cat.3 R40, R48/23, R43

Environment

Australia - National Pollutant Inventory (NPI) Substance List

- Mineral Spirits 64742-47-8 10% Not Listed
- Chromium 7440-47-3 17% Not Listed
10 tonnes/year Threshold category 1 (Nickel and compounds); 2000 tonnes/year Threshold category 2b
- Nickel 7440-02-0 12% (Nickel and compounds); 60000 MWH Threshold category 2b (Nickel and compounds); 20 MW Threshold category 2b (Nickel and compounds)

Australia - Priority Existing Chemical Program

- Mineral Spirits 64742-47-8 10% Not Listed
- Chromium 7440-47-3 17% Not Listed
- Nickel 7440-02-0 12% Standby chemical

Canada

Labor

Canada - WHMIS - Classifications of Substances

- Mineral Spirits 64742-47-8 10% Not Listed
- Chromium 7440-47-3 17% Uncontrolled product according to WHMIS classification criteria
- Nickel 7440-02-0 12% D2A, D2B; B6, D2A (Raney)

Canada - WHMIS - Ingredient Disclosure List

- Mineral Spirits 64742-47-8 10% Not Listed
- Chromium 7440-47-3 17% 0.1 %
- Nickel 7440-02-0 12% 0.1 %

Environment

Canada - CEPA - Priority Substances List

- Mineral Spirits 64742-47-8 10% Not Listed
- Chromium 7440-47-3 17% Not Listed
- Nickel 7440-02-0 12% Not Listed

Europe

Environment

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

- Mineral Spirits 64742-47-8 10% Not Listed
- Chromium 7440-47-3 17% Not Listed
- Nickel 7440-02-0 12% Not Listed

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

- Mineral Spirits 64742-47-8 10% Not Listed
- Chromium 7440-47-3 17% Not Listed
- Nickel 7440-02-0 12% Not Listed

Other

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

- Mineral Spirits 64742-47-8 10% Xn; R65
- Chromium 7440-47-3 17% Not Listed
- Nickel 7440-02-0 12% Carc.Cat.3; R40 R43 T; R48/23

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

- Mineral Spirits 64742-47-8 10% Not Listed
- Chromium 7440-47-3 17% Not Listed
- Nickel 7440-02-0 12% Not Listed

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

- Mineral Spirits 64742-47-8 10% Xn R:65 S:(2)-23-24-62
- Chromium 7440-47-3 17% Not Listed
- Nickel 7440-02-0 12% T R:40-43-48/23 S:(2)-36/37/39-45

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

- Mineral Spirits 64742-47-8 10% H
- Chromium 7440-47-3 17% Not Listed
- Nickel 7440-02-0 12% S, 7

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

- Mineral Spirits 64742-47-8 10% S:(2)-23-24-62
- Chromium 7440-47-3 17% Not Listed
- Nickel 7440-02-0 12% S:(2)-36/37/39-45

Germany

Environment

Germany - Water Classification (VwVwS) - Annex 1

- Mineral Spirits 64742-47-8 10% Not Listed
- Chromium 7440-47-3 17% ID Number 1443, not considered hazardous to water
- Nickel 7440-02-0 12% Not Listed

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

- Mineral Spirits 64742-47-8 10% Number 5350, hazard class 1 - low hazard to waters
- Chromium 7440-47-3 17% Not Listed
- Nickel 7440-02-0 12% Number 7182, hazard class 2 - hazard to waters (footnote 47)

Germany - Water Classification (VwVwS) - Annex 3

- Mineral Spirits 64742-47-8 10% Not Listed
- Chromium 7440-47-3 17% Not Listed
- Nickel 7440-02-0 12% ID Number 7616, hazard class 2 - hazard to waters (particle size <0.1 mm)

Hong Kong

Labor

Hong Kong - Dangerous Substances Regulations - Classification

- Mineral Spirits 64742-47-8 10% Not Listed
- Chromium 7440-47-3 17% Not Listed
- Nickel 7440-02-0 12% Not Listed

Other

Hong Kong - Controlled Carcinogens

- Mineral Spirits 64742-47-8 10% Not Listed
- Chromium 7440-47-3 17% Not Listed
- Nickel 7440-02-0 12% Not Listed

India

Environment

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

- Mineral Spirits 64742-47-8 10% Not Listed
- Chromium 7440-47-3 17% (powder)
- Nickel 7440-02-0 12% (powder)

Mexico

Other

Mexico - Hazard Classifications

- Mineral Spirits 64742-47-8 10% Not Listed
- Chromium 7440-47-3 17% Not Listed
- Nickel 7440-02-0 12% Not Listed

Mexico - Regulated Substances

- Mineral Spirits 64742-47-8 10% Not Listed
- Chromium 7440-47-3 17% Not Listed
- Nickel 7440-02-0 12% Not Listed

Russia

Labor

Russia - Limiting Quantities of Hazardous Substances

- Mineral Spirits 64742-47-8 10% Not Listed
- Chromium 7440-47-3 17% Not Listed
- Nickel 7440-02-0 12% Not Listed

Taiwan

Environment

Taiwan - Toxic Chemical Substances Control Act - Threshold Regulated Quantities

- Mineral Spirits 64742-47-8 10% Not Listed
- Chromium 7440-47-3 17% Not Listed
- Nickel 7440-02-0 12% Not Listed

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

- Mineral Spirits 64742-47-8 10% Not Listed
- Chromium 7440-47-3 17% Not Listed
- Nickel 7440-02-0 12% Not Listed

United States

Labor

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

- Mineral Spirits 64742-47-8 10% Not Listed
- Chromium 7440-47-3 17% Not Listed
- Nickel 7440-02-0 12% Not Listed

U.S. - OSHA - Specifically Regulated Chemicals

- Mineral Spirits 64742-47-8 10% Not Listed
- Chromium 7440-47-3 17% Not Listed
- Nickel 7440-02-0 12% Not Listed

Environment

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

- Mineral Spirits 64742-47-8 10% Not Listed
- Chromium 7440-47-3 17% Not Listed
- Nickel 7440-02-0 12% Not Listed

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

- Mineral Spirits 64742-47-8 10% Not Listed
- Chromium 7440-47-3 17%
5000 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); 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)
- Nickel 7440-02-0 12%
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)

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

- Mineral Spirits 64742-47-8 10% Not Listed
- Chromium 7440-47-3 17% 1.0 % de minimis concentration
- Nickel 7440-02-0 12% 0.1 % de minimis concentration

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

- Mineral Spirits 64742-47-8 10% Not Listed
- Chromium 7440-47-3 17% Included in waste streams: F032, F034, F035, F037, F038, F039, K090, K091
- Nickel 7440-02-0 12% Included in waste streams: F006, F039

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

- Mineral Spirits 64742-47-8 10% Not Listed
- Chromium 7440-47-3 17% (total)
- Nickel 7440-02-0 12% (total)

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

- Mineral Spirits 64742-47-8 10% Not Listed
- Chromium 7440-47-3 17% 5.0 mg/L regulatory level
- Nickel 7440-02-0 12% Not Listed

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

- Mineral Spirits 64742-47-8 10% Not Listed
- Chromium 7440-47-3 17% hazardous constituent - no waste number
- Nickel 7440-02-0 12% hazardous constituent - no waste number

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

- Mineral Spirits 64742-47-8 10% Not Listed
- Chromium 7440-47-3 17% (total)
- Nickel 7440-02-0 12% (total)

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

- Mineral Spirits 64742-47-8 10% Not Listed
- Chromium 7440-47-3 17% 2.77 mg/L (total, wastewater); 0.60 mg/L TCLP (total, nonwastewater)
- Nickel 7440-02-0 12% 3.98 mg/L (wastewater); 11.0 mg/L TCLP (nonwastewater)

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

- Mineral Spirits 64742-47-8 10% Not Listed
- Chromium 7440-47-3 17% (total)
- Nickel 7440-02-0 12% (total)

United States - California

Environment

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

- Mineral Spirits 64742-47-8 10% Not Listed
- Chromium 7440-47-3 17% Not Listed
- Nickel 7440-02-0 12% carcinogen, initial date 10/1/89

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

- Mineral Spirits 64742-47-8 10% Not Listed
- Chromium 7440-47-3 17% Not Listed
- Nickel 7440-02-0 12% Not Listed

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

- Mineral Spirits 64742-47-8 10% Not Listed
- Chromium 7440-47-3 17% Not Listed
- Nickel 7440-02-0 12% Not Listed

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

- Mineral Spirits 64742-47-8 10% Not Listed
- Chromium 7440-47-3 17% Not Listed
- Nickel 7440-02-0 12% Not Listed

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

- Mineral Spirits 64742-47-8 10% Not Listed
- Chromium 7440-47-3 17% Not Listed
- Nickel 7440-02-0 12% Not Listed

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

- Mineral Spirits 64742-47-8 10% Not Listed
- Chromium 7440-47-3 17% Not Listed
- Nickel 7440-02-0 12% Not Listed

United States - Pennsylvania

Labor

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

- Mineral Spirits 64742-47-8 10% Not Listed
- Chromium 7440-47-3 17%
- Nickel 7440-02-0 12%

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

- Mineral Spirits 64742-47-8 10% Not Listed
- Chromium 7440-47-3 17%
- Nickel 7440-02-0 12%

United States - Rhode Island

Labor

U.S. - Rhode Island - Hazardous Substance List

- Mineral Spirits 64742-47-8 10% Not Listed
- Chromium 7440-47-3 17% Toxic; Carcinogen
- Nickel 7440-02-0 12% Toxic; Carcinogen

Section 16 - Other Information

- Preparation Date** ▪ 3/8/2011
- Last Revision Date** ▪ 3/8/2011
- Disclaimer/Statement of Liability** ▪ The information provided in this material safety data sheet has been obtained from sources believed to be reliable. Palm International, Inc. provides no warranties, either express or implied and assumed no responsibility for the accuracy or completeness of the data contained herein. This information is offered for your information, consideration and investigation. You should satisfy yourself that you have all current data relevant to your particular use. Palm International, Inc. know of no medical condition, other than those noted on this material safety data sheet, which are generally recognized as being aggravated by exposure to this product.

Key to abbreviations

NDA = No Data Available