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Revision Date 2015-05-15

Revision Number 1

1. Identification of the substance/preparation and of the Company/undertaking

Product Identifier

Product Type Welding powder
Product name **Deloro 25 powder**
Product code KSPN1005-2

Other means of identification

Synonyms No information available

Recommended use of the chemical and restrictions on use

Recommended Use Wear and Corrosion Resistant Welding Consumable. For use in industrial installations only.

Uses advised against None reasonably foreseeable

Details of the Supplier of the Safety Data Sheet

Emergency Telephone Number

Emergency Telephone Number CHEMTREC: +1-703-527-3887 (INTERNATIONAL)
1-800-424-9300 (NORTH AMERICA)

NRC (National Response Center) USA, Poison Centres +1 800 222 1222
Canada, IWK Regional Poison Center +1 902 470 8161 or 1 800 565 8161

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2. Hazards Identification

Classification

Skin sensitization	Category 1
Carcinogenicity	Category 1B
Specific target organ toxicity (repeated exposure)	Category 1

Label Elements

Emergency Overview

DANGER

Hazard Statements

May cause an allergic skin reaction. May cause cancer by inhalation. Causes damage to organs through prolonged or repeated exposure. Harmful to aquatic life with long lasting effects.



Precautionary Statements - Prevention

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Do not get in eyes, on skin, or on clothing. Do not breathe dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. Wear respiratory protection. In case of inadequate ventilation wear respiratory protection. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention Specific treatment is urgent (see supplemental first aid instructions on this label) **Skin** Immediately call a POISON CENTER or doctor/physician. IF ON SKIN: Gently wash with plenty of soap and water. Remove/Take off immediately all contaminated clothing. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice/attention. **Inhalation** IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician. **Ingestion** IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth.

Precautionary Statements - Storage

Store locked up. Store in a well-ventilated place. Keep container tightly closed.

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant.

Appearance metallic Powder

Physical State solid

Odor none

Hazards not otherwise classified (HNOC)

Welding Hazards

CAUTION. Welding will create fumes which may be toxic. If welding is performed on plated or coated materials such as galvanised or painted steel, excessive fume may be produced which contains additional hazardous components, and may result in metal fume fever or other health effects. Arc Rays can injure eyes and burn skin. Electric shock can kill. The product and work surface will be hot during and after welding.

OTHER INFORMATION

Other Hazards

May cause long lasting harmful effects to aquatic life.

Unknown Aquatic Toxicity

4.725% of the mixture consists of ingredient(s) of unknown toxicity

3. Composition/Information on Ingredients

Chemical name	Formula	CAS-No	weight-%	GHS Classification
Nickel	Ni	7440-02-0	> 50	STOT RE 1 (H372) S,7 Carc. 2 (H351) S,7 Skin Sens. 1 (H317) S,7 Aquatic Chronic 3 (H412)
Silicon Metal	Si	7440-21-3	2.5 - 3	
Boron	B	7440-42-8	1 - 2.5	
Iron	Fe	7439-89-6	0.1 - 1	
Chromium	Cr	7440-47-3	0.1 - 1	
Molybdenum	Mo	7439-98-7	0.1 - 1	
Manganese	Mn	7439-96-5	0.1 - 1	

Cobalt	Co	7440-48-4	0.1 - 1	Acute Oral 4 (H302) Acute dust/mist 1 (H330) Eye damage 2 (H319) Resp. Sens. 1B (H334) Skin Sens. 1 (H317) Carc. 1B (H350i) Repr. tox 2 (H361f) Aquatic Acute 1 M=10(H400) Aquatic Chronic 1 M=1(H410)
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* The exact percentage (concentration) of composition has been withheld as a trade secret.

NOTE

This product may contain additional substances with a content of less than 0.1 % per substance, which are not listed.

Full text of H-Statements referred to under sections 2 and 3

- H302 - Harmful if swallowed
- H317 - May cause an allergic skin reaction
- H319 - Causes serious eye irritation
- H330 - Fatal if inhaled
- H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled
- H350i - May cause cancer by inhalation
- H351 - Suspected of causing cancer if inhaled
- H361f - Suspected of damaging fertility
- H372 - Causes damage to organs through prolonged or repeated exposure
- H400 - Very toxic to aquatic life
- H410 - Very toxic to aquatic life with long lasting effects
- H412 - Harmful to aquatic life with long lasting effects

4. First aid measures

FIRST AID MEASURES

General advice

Immediate medical attention is required. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Eye Contact

Keep eye wide open while rinsing. Call a physician immediately. Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

Skin contact

Immediate medical attention is required. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash off immediately with soap and plenty of water.

Inhalation

Move to fresh air. Immediate medical attention is required. If not breathing, give artificial respiration.

Ingestion

Do NOT induce vomiting. Drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately. Rinse mouth.

Self-protection of the first aider

Wear suitable gloves. Self-protection of the first aider.

Most important symptoms and effects, both acute and delayed

Most important symptoms and effects, both acute and delayed

CNS and psychiatric effects, Parkinson-like symptoms. Languor, sleepiness and weakness in legs. A stolid masklike appearance of face, emotional disturbances such as uncontrollable laughter and spastic gait with tendency to fall in walking and findings in more advanced cases. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Indication of any immediate medical attention and special treatment needed

Notes to Physician

Treat symptomatically. May cause sensitization by inhalation and skin contact. May cause sensitization of susceptible persons.

5. Fire-fighting measures

Suitable extinguishing media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Extinguishing media which must not be used for safety reasons	none.
Specific hazards arising from the chemical	Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes Thermal decomposition can lead to release of irritating and toxic gases and vapors May cause sensitization by inhalation and skin contact Carbon oxides
Protective equipment and precautions for firefighters	Use personal protective equipment as required In the event of fire, wear self-contained breathing apparatus

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	
Personal precautions	Avoid contact with skin and eyes. Ensure adequate ventilation. Use personal protective equipment as required. Avoid dust accumulation in enclosed space.
OTHER INFORMATION	See Section 12 for additional Ecological Information.
Environmental precautions	Avoid release to the environment.
Methods and material for containment and cleaning up	Pick up and transfer to properly labeled containers. Do not dry sweep dust. Wet dust with water before sweeping or use a vacuum to collect dust.

7. Handling and Storage

Precautions for safe handling	Do not eat, drink or smoke when using this product. In case of insufficient ventilation, wear suitable respiratory equipment. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with eyes, skin and clothing. Wear suitable protective clothing. Use only with adequate ventilation. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
Conditions for safe storage, including any incompatibilities	
Storage	Keep in properly labeled containers. Keep container tightly closed in a dry and well-ventilated place. Keep containers tightly closed in a cool, well-ventilated place.
Incompatible products	None known based on information supplied.
Specific use(s)	Welding. Restricted to professional users. For use in industrial installations only.

8. Exposure Controls/Personal Protection

Control parameters

Exposure Guidelines

Exposure Guidelines

Chemical name	USA - ACGIH TLV	USA - OSHA PEL	USA - NIOSH IDLH	Argentina	Brazil
Nickel	1.5 mg/m ³ TWA (inhalable fraction)	1 mg/m ³ TWA	10 mg/m ³ IDLH	TWA: 1.5 mg/m ³	
Silicon Metal	-	15 mg/m ³ TWA (total dust); 5 mg/m ³ TWA (respirable fraction)	Not Listed	TWA: 10 mg/m ³	

Chromium	0.5 mg/m ³ TWA	1 mg/m ³ TWA	250 mg/m ³ IDLH	TWA: 0.5 mg/m ³	
Molybdenum	10 mg/m ³ TWA (inhalable fraction); 3 mg/m ³ TWA (respirable fraction)	Not Listed	5000 mg/m ³ IDLH	TWA: 10 mg/m ³ TWA: 3 mg/m ³	
Manganese	0.02 mg/m ³ TWA (respirable fraction); 0.1 mg/m ³ TWA (inhalable fraction)	-	500 mg/m ³ IDLH	TWA: 0.2 mg/m ³	5 mg/m ³ TWA LT (dust); 1 mg/m ³ TWA LT (fume)
Cobalt	0.02 mg/m ³ TWA	0.1 mg/m ³ TWA (dust and fume)	20 mg/m ³ IDLH (dust and fume)	TWA: 0.02 mg/m ³	
Chemical name	Canada - Alberta	Canada - British Columbia	Canada - Ontario	Canada - Quebec	Canada - Manitoba
Nickel	1.5 mg/m ³ TWA	0.05 mg/m ³ TWA	1 mg/m ³ TWA (inhalable)	1 mg/m ³ TWAEV	1.5 mg/m ³ TWA (inhalable fraction)
Silicon Metal		10 mg/m ³ TWA (total dust); 3 mg/m ³ TWA (respirable fraction)	10 mg/m ³ TWA (total dust)	10 mg/m ³ TWAEV (containing no Asbestos and <1% Crystalline silica, total dust)	
Chromium	0.5 mg/m ³ TWA	0.5 mg/m ³ TWA	0.5 mg/m ³ TWA	0.5 mg/m ³ TWAEV	0.5 mg/m ³ TWA
Molybdenum	10 mg/m ³ TWA (total); 3 mg/m ³ TWA (respirable)	3 mg/m ³ TWA (respirable); 10 mg/m ³ TWA (inhalable)	10 mg/m ³ TWA (metal, inhalable); 3 mg/m ³ TWA (metal, respirable)		10 mg/m ³ TWA (inhalable fraction); 3 mg/m ³ TWA (respirable fraction)
Manganese	0.2 mg/m ³ TWA	0.2 mg/m ³ TWA	0.2 mg/m ³ TWA	5 mg/m ³ TWAEV (dust); 1 mg/m ³ TWAEV (fume) 3 mg/m ³ STEV (fume)	0.02 mg/m ³ TWA (respirable fraction); 0.1 mg/m ³ TWA (inhalable fraction) 0.02 mg/m ³ TWA (as Mn, listed under respirable fraction); 0.1 mg/m ³ TWA (as Mn)
Cobalt	0.02 mg/m ³ TWA	0.02 mg/m ³ TWA	0.02 mg/m ³ TWA	0.02 mg/m ³ TWAEV	0.02 mg/m ³ TWA 0.02 mg/m ³ TWA (as Co)
Chemical name	Chile	Mexico OEL (TWA)	Peru	Uruguay	Venezuela
Nickel	TWA: 0.8 mg/m ³	1 mg/m ³ TWA LMPE-PPT	1.5 mg/m ³ TWA	1.5 mg/m ³ TWA (inhalable fraction)	TWA: 1.5 mg/m ³
Silicon Metal		10 mg/m ³ TWA LMPE-PPT (inhalable fraction)	10 mg/m ³ TWA (inhalable fraction); 4 mg/m ³ TWA (respirable fraction); 5 mg/m ³ TWA (welding fumes)		TWA: 10 mg/m ³
Chromium	TWA: 0.4 mg/m ³	0.5 mg/m ³ TWA LMPE-PPT		0.5 mg/m ³ TWA	TWA: 0.5 mg/m ³
Molybdenum		-		10 mg/m ³ TWA (inhalable fraction); 3 mg/m ³ TWA (respirable fraction)	TWA: 10 mg/m ³ TWA: 3 mg/m ³
Manganese	TWA: 0.8 mg/m ³ TWA: 4 mg/m ³	0.2 mg/m ³ TWA LMPE-PPT; 1 mg/m ³ TWA LMPE-PPT (fume, as Mn)	0.2 ppm TWA	0.02 mg/m ³ TWA (respirable fraction); 0.1 mg/m ³ TWA (inhalable fraction)	TWA: 0.2 mg/m ³
Cobalt	TWA: 0.016 mg/m ³	0.1 mg/m ³ TWA LMPE-PPT (dust and fume, as Co)	0.02 mg/m ³ TWA	0.02 mg/m ³ TWA	TWA: 0.02 mg/m ³

NIOSH IDLH: Immediately Dangerous to Life or Health

Other Exposure Guidelines Hexavalent Chrome may be formed during welding.

Chemical name	Derived No Effect Level (DNEL)	Predicted No Effect Concentration (PNEC)
Nickel	4 mg/m ³ short term local inhalation; 0.05 mg/m ³ long term local inhalation	0.0035-0.0218 mg/l freshwater; 0.0023 mg/l marine water

Iron	3 mg/m ³ local inhalation	No information available at product level
Chromium	0.5 mg/m ³ local inhalation	No information available at product level
Molybdenum	11.17 mg/m ³ longterm local inhalation	No information available at product level
Manganese	0.2 mg/m ³ systemic inhalation	No information available at product level
Cobalt	0.04 mg/m ³ long term local inhalation	2.36 µg Co/l (AF 3) marine water; 0.74 µg/l (AF 3) fresh water

Appropriate engineering controls

Engineering controls Showers
 Eyewash stations
 Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye Protection Wear safety glasses with side shields (or goggles).

Skin Protection Wear suitable gloves. Wear suitable protective clothing.

Hand Protection Protective gloves. The product and work surface will be hot during and after welding. Ensure adequate protection is in place to stop individuals from burning themselves.

Respiratory protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Hygiene Measures Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Wash hands thoroughly after handling.

Biological standards

Chemical name	USA ACGIH -BEI	Argentina - Occupational Exposure Limits - Biological Exposure Indices (BEIs)	Chile - Occupational Exposure Limits - Biological Exposure Indices (BEIs)
Cobalt 7440-48-4	15 µg/L Medium: urine Time: end of shift at end of workweek Parameter: Cobalt (background); 1 µg/L Medium: blood Time: end of shift at end of workweek Parameter: Cobalt (background, semi-quantitative)	15 µg/L urine end of shift on the last day of workweek Co (Background); 1 µg/L blood end of shift on the last day of workweek Co (Background, semi-quantitative)	
Chemical name	Mexico - Occupational Exposure Limits - BEIs (IBE)	Venezuela - Biological Exposure Indices (BEIs)	...
Cobalt 7440-48-4	15 µg/L Medium: urine Time: end of shift at end of work week Parameter: Cobalt (background); 1 µg/L Medium: blood Time: end of shift at end of work week Parameter: Cobalt (background, semi-quantitative)	15 µg/L urine end of shift at end of workweek Cobalt (F); 1 µg/L urine end of shift at end of workweek Cobalt (F,Sc)	

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical State	solid	Appearance	metallic Powder
Odor	none	Melting point/freezing point	965-1040 °C / 1770-1900 °F
Boiling temperature / boiling range		Flash Point	
Evaporation Rate		Flammability (solid, gas)	

Upper flammability limits		Lower Flammability Limit
Water solubility	Insoluble in water	Autoignition temperature
Kinematic viscosity		Dynamic viscosity
Explosive properties	not applicable	

OTHER INFORMATION

VOC Content (%) Not Applicable
Density 8.44 g/cm³

10. Stability and Reactivity

Reactivity Stable under normal conditions

No data available

Chemical stability Stable under normal conditions.

Stable under normal conditions.

Possibility of Hazardous Reactions None under normal processing.

Conditions to avoid Keep away from sources of heat (e.g. hot surfaces), sparks and open flames.

incompatible materials Acids. Strong oxidizing agents.

Hazardous decomposition products Thermal decomposition can lead to release of toxic/corrosive gases and vapors.

11. Toxicological Information

Information on likely routes of exposure

Inhalation May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Eye Contact Contact with eyes may cause irritation. Particulates may cause irritation due to mechanical abrasion. May cause eye irritation with susceptible persons.

Skin contact Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. Prolonged contact may cause redness and irritation. Prolonged skin contact may defat the skin and produce dermatitis. May cause sensitization by skin contact.

Ingestion Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Ingestion may cause irritation to mucous membranes.

Chemical name	Oral LD50	dermal LD50	Inhalation LC50
Nickel - 7440-02-0	>9000 mg/kg bw	Data waiving - Other Justification	NOAEC >=10.2 mg/L air
Silicon Metal - 7440-21-3	LD50 >3160 mg/kg bw	LD50 >5000 mg/kg bw	Acutely Non Toxic
Boron - 7440-42-8	650 mg/kg (Rat)	Not Listed in C&L Inventory	Not Listed in C&L Inventory
Iron - 7439-89-6	= 984 mg/kg (Rat)		Inhalation LC50 (4 hrs)
Chromium - 7440-47-3	LD50 >5000 mg/kg bw	Data waiving - Study Scientifically Unjustified	LC50 >5.41 mg/L air (analytical)
Molybdenum - 7439-98-7	LD50 >2000 mg/kg bw	Not Classified	LC50 >3.92 mg/L air
Manganese - 7439-96-5	LD50 >2000 mg/kg bw	Data waiving - Study Scientifically Unjustified	LC50 >5.14 mg/L air (analytical)
Cobalt - 7440-48-4	550 mg/kg bw	>2000 mg/kg bw	0.05 mg/L

Information on toxicological effects

Chemical name	US ACGIH - Critical effects
Nickel - 7440-02-0	dermatitis; pneumoconiosis

Chromium - 7440-47-3	skin and upper respiratory tract irritation
Manganese - 7439-96-5	CNS impairment
Cobalt - 7440-48-4	asthma; myocardial effects; pulmonary function

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation Repeated exposure may cause skin dryness or cracking.

Sensitization May cause sensitization of susceptible persons.

MUTAGENIC EFFECTS None known.

Carcinogenicity This product contains one or more substances which are classified by IARC as carcinogenic to humans (Group I), probably carcinogenic to humans (Group 2A) or possibly carcinogenic to humans (Group 2B).

Chemical name	ACGIH	IARC	NTP	OSHA
Nickel - 7440-02-0	A5 - Not Suspected as a Human Carcinogen	Nickel Compounds: Group 1 - Known Human Carcinogen - Nickel, Metallic & Alloy: Group 2B - Possible Human Carcinogen	Reasonably anticipated to be a Human Carcinogen	Not Listed
Chromium - 7440-47-3	A4 - Not Classifiable as a Human Carcinogen	Group 3 - Not Classified as a Human Carcinogen	Not Listed	Not Listed
Cobalt - 7440-48-4	A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans	Group 2B - Possible Human Carcinogen	Not Listed	Not Listed
Chemical name	Chile	Argentina	Venezuela	Peru
Nickel - 7440-02-0	A1 - Confirmed Human Carcinogen	A5 - Not Suspected as a human carcinogen	A5 - Not an Alleged Carcinogen in Humans	A1 - Confirmed Human Carcinogen
Chromium - 7440-47-3	A4 - Not Classifiable as a Human Carcinogen	A4 - Not classifiable as a human carcinogen	A4 - Not Classified as a Carcinogen in Humans	
Cobalt - 7440-48-4	A3 - Animal Carcinogen	A3 - Confirmed animal carcinogen with unknown relevance to humans	Present	

Reproductive toxicity Contains a known or suspected reproductive toxin.

Developmental toxicity None known

Chronic toxicity Prolonged exposure may cause chronic effects. CNS and psychiatric effects, Parkinson-like symptoms. Languor, sleepiness and weakness in legs. A stolid masklike appearance of face, emotional disturbances such as uncontrollable laughter and spastic gait with tendency to fall in walking and findings in more advanced cases. Repeated contact may cause allergic reactions in very susceptible persons. Avoid repeated exposure. Repeated or prolonged skin contact may cause skin irritation and/or dermatitis and sensitization of susceptible persons. Repeated or prolonged exposure may cause central nervous system damage. Contains a known or suspected reproductive toxin.

Target organ effects blood, Eyes, Jaw, kidney, liver, Lungs, Nasal Cavities, respiratory system, Skin, Teeth.

Neurological effects Repeated or prolonged exposure may cause central nervous system damage. Prolonged or excessive exposure to manganese in dust or fume may cause irreversible central nervous system damage (Manganism). Symptoms resemble Parkinson's disease and include tremors, impaired speech, mask like face and impaired movement.

Numerical measures of toxicity - Product Information

Unknown Aquatic Toxicity 4.725% of the mixture consists of ingredient(s) of unknown toxicity
The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral) 732 mg/kg
 ATEmix (dermal) 5 mg/kg
 ATEmix (inhalation-gas) 10 mg/l

12. Ecological Information

12.1. Ecotoxicity 4.60000000000001% of the mixture consists of component(s) of unknown hazards to the aquatic environment

Chemical name	Algae toxicity	Acute Fish toxicity	Toxicity to Microorganisms	Daphnia magna
Nickel 7440-02-0	EC10 - 316.5 ug/L	LC50 - 15.3 mg/L	Not available	LC50 >200ug/L (@6-6.5 pH), 13ug/L (@8-8.5pH)
Silicon Metal 7440-21-3	Data Waiving - Study Scientifically Unjustified	Data Waiving - Other Justification	Not available	Data Waiving - Study Scientifically Unjustified
Iron 7439-89-6	NOEC - 1.4 mg/L	Data Waiving - Study Scientifically Unjustified	Not available	Data Waiving - Study Scientifically Unjustified
Chromium 7440-47-3	Data Waiving - Study Scientifically Unjustified	Data Waiving - Study Scientifically Unjustified	Not available	Data Waiving - Study Scientifically Unjustified
Molybdenum 7439-98-7	EC10 - 150 mg/L, NOEL - 169.9 ,h/L	LC50 - 609 mg/L	Not available	EC50 - 2847.5 mg/L
Manganese 7439-96-5	EC50 - 4.5 mg/L	NOEC - 3.6 mg/L	Not available	EC 50 > 1.6 mg/L
Cobalt 7440-48-4	EC50 - 270ug/L	NOEC - 100 mg/L - Cobalt Powder	Not available	LOEC - 5.6 mg/L, LC50 > 100 mg/L

12.2 Persistence and degradability Product/Substance is inorganic. not applicable.

Bioaccumulation/Accumulation No information available.

12.6 Other adverse effects

13. Disposal Considerations

Waste treatment methods Should not be released into the environment.

Waste from residues/unused products Reuse or recycle.

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal.

California Waste Status This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical name	California Hazardous Waste Status
Nickel - 7440-02-0	Toxic Ignitable
Chromium - 7440-47-3	Toxic Corrosive Ignitable
Molybdenum - 7439-98-7	Ignitable
Manganese - 7439-96-5	Ignitable
Cobalt - 7440-48-4	Toxic Ignitable

14. Transport Information

DOT Not regulated

Chemical name	U.S. - DOT Reportable Quantities	DOT Marine Pollutant	DOT Severe Marine pollutant
Nickel 7440-02-0	100 lbs RQ (The RQ for these hazardous substances is limited to those pieces of the metal having a diameter smaller than 100 µm (0.004 inches).); 45.4 kg RQ (The RQ for these hazardous substances is limited to those pieces of the metal having a diameter smaller than 100 µm (0.004 inches).)		
Chromium 7440-47-3	5000 lbs RQ (The RQ for these hazardous substances is limited to those pieces of the metal having a diameter smaller than 100 µm (0.004 inches).); 2270 kg RQ (The RQ for these hazardous substances is limited to those pieces of the metal having a diameter smaller than 100 µm (0.004 inches).)		

TDG Not regulated

MEX Not regulated

ICAO / IATA-DGR Not regulated

IMO / IMDG Not regulated

15. Regulatory Information

Chemical name	Bolivia - hazardous substances regulated under Bolivia's Environmental Regulations for the Industrial Manufacturing Sector
Nickel - 7440-02-0	Present
Cobalt - 7440-48-4	Present

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
 DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical name	CAS-No	weight-%	SARA 313 - Threshold Values %
Chromium - 7440-47-3	7440-47-3	0.1 - 1	Present
Cobalt - 7440-48-4	7440-48-4	0.1 - 1	Present

SARA 311/312 Hazard Categories

Acute health hazard	yes
Chronic Health Hazard	yes
Fire Hazard	no
Sudden release of pressure hazard	no
Reactive Hazard	no

Clean Water Act

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Nickel - 7440-02-0	Not Applicable	Present	Present	Not Applicable
Chromium - 7440-47-3	Not Applicable	Present	Present	Not Applicable

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Nickel - 7440-02-0	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 >100 µm); 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 >100 µm)		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 >100 µm); 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 >100 µm)
Chromium - 7440-47-3	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 >100 µm); 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 >100 µm)		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 >100 µm); 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 >100 µm)

U.S. State Regulations

California Proposition 65 This product contains the following Proposition 65 chemicals:

Chemical name	California - Proposition 65 - Carcinogens List	California - Proposition 65 - Developmental Toxicity	California - Proposition 65 - Reproductive Toxicity	California - 22 CCR - Toxic and Extremely Hazardous Carcinogenic Wastes
Nickel - 7440-02-0	carcinogen, initial date 10/1/89 (metallic)			
Cobalt - 7440-48-4	carcinogen, initial date 7/1/92 (powder)			

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Nickel - 7440-02-0	sn 1341 (dust and fume)	Carcinogen; Extraordinarily hazardous	Environmental hazard; Special hazardous substance Present
Silicon Metal - 7440-21-3	sn 3125 (powder)	Present (dust, exempt when encapsulated or if particulates are not present and cannot be substantially generated through use of the product)	Present
Boron - 7440-42-8	sn 3201	Not Listed	Not Listed
Chromium - 7440-47-3	sn 0432	Carcinogen; Extraordinarily hazardous	Environmental hazard; Special hazardous substance Present
Molybdenum - 7439-98-7	sn 1309	Present	Present
Manganese - 7439-96-5	sn 1155 (dust and fume)	Present	Environmental hazard Present
Cobalt - 7440-48-4	sn 0520	Present	Environmental hazard (fume) Present

U.S. EPA Label information

CANADA

Chemical name	WHMIS Classifications of Components
Nickel - 7440-02-0	D2A, D2B; B6, D2A (Raney)
Silicon Metal - 7440-21-3	B4
Iron - 7439-89-6	Uncontrolled product according to WHMIS classification criteria
Chromium - 7440-47-3	Uncontrolled product according to WHMIS classification criteria
Molybdenum - 7439-98-7	Uncontrolled product according to WHMIS classification criteria
Manganese - 7439-96-5	D2A (including powder)

Cobalt - 7440-48-4	D2A, D2B
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16. Other Information

NFPA	Health hazard 2	Flammability 0	Instability 0	Physical and Chemical Hazards -
HMIS	Health hazard 2	Flammability 0	Physical hazards 0	Personal precautions -
Issuing Date	2015-04-17			
Revision Date	2015-05-15			
Revision Note	No information available			

Disclaimer

Kennametal urges each customer or recipient of this SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific SDSs, we are not and cannot be responsible for SDS's obtained from any source other than ourselves. If you have obtained an SDS from another source or if you are not sure that the SDS you have is current, please contact us for the most current version.

End of Safety Data Sheet