SAFETY DATA SHEETS

This SDS packet was issued with item:

070871723

The safety data sheets (SDS) in this packet apply to the individual products listed below. Please refer to invoice for specific item number(s).

070871442 070871459 070871467 070871475 070871483 070871491 070871509 070871517 070871525 070871533
070871541 070871558 070871566 070871574 070871582 070871590 070871608 070871616 070871624 070871632
070871640 070871657 070871665 070871673 070871681 070871699 070871707 070871715 070871731 070871749
070871756 070871798 070871806 070871814 070871822 070871830 070871848 070871855 070871863 070871871
070871889 070871897 070871905 070871913 070871921 070871939 070871947 070871954 070871962 070872010
070872028 070872036 070872044 070872051 070872069 070872077 070872085 070872093 070872101 070872119
070872127 070872135 070872143 070872150 070872168 070872176 070872184 070872192 070872200 070872218
070872226 070872234 070872242 070872267 070872275 070872283

Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Patterson K Files

SECTION 1: Identification

Product identifier

Product name: Patterson K Files

Product code: 070871418, 070871426, 070871434, 070872010, 070872028, 070872036, 070872044, 070872051, 070872069 070871442, 070871459, 070871467, 070871475, 070871483, 070871491, 070871509, 070871517, 070871525 070872077, 070871533, 070871541, 070871558, 070871566

Additional information: 070872085, 070872093, 070872101, 070872119 070872127, 070872135, 070871574, 070871582, 070871590, 070871608, 070871616, 070871624, 070871632 070871640, 070871657, 070872143, 070871665, 070871673, 070871681, 070871699, 070872150, 070872168 070872176, 070872184, 070872192, 070872200, 070871707, 070871715, 070871723, 070871731, 070871749 070871756, 070872218, 070871798, 070871806, 070871814, 070871822, 070872226, 070872234, 070872242 070872259, 070872267, 070872275, 070871830, 070871848, 070871855

Recommended use of the product and restriction on use

Relevant identified uses: Not determined or not applicable.

Uses advised against: Not determined or not applicable.

Reasons why uses advised against: Not determined or not applicable.

Manufacturer or supplier details

Manufacturer:

Supplier

Patterson Companies, Inc.
1031 Mendota Heights Road
St. Paul, MN 55120
1-800-328-5536 Fax:1-651-686-9331

Emergency telephone number:

United States

CHEMTREC

Within USA and Canada: 1-800-424-9300 (CHEMTREC, 24 hours)
Outside USA and Canada: +1-703-527-3887 (CHEMTREC, 24 hours)

SECTION 2: Hazard(s) identification

GHS classification: Not a hazardous substance or mixture

Label elements

Hazard pictograms: None

Signal word: None

Hazard statements: None

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Precautionary statements: None
Hazards not otherwise classified: None

SECTION 3: Composition/information on ingredients

Identification	Name	Weight %
CAS number: 7440-02-0	Nickel (solid)	9
CAS number: 7440-47-3	Chromium	18
CAS number: 7439-96-5	Manganese	2
CAS number: 7440-48-4	Cobalt	0.75
CAS number: 1309-37-1	Iron	69.5

Additional Information: None

SECTION 4: First aid measures

Description of first aid measures

General notes:
Not determined or not applicable.

After inhalation:
Loosen clothing as necessary and position individual in a comfortable position
Maintain an unobstructed airway
Get medical advice/attention if you feel unwell

After skin contact:
Rinse affected area with soap and water
If symptoms develop or persist, seek medical attention

After eye contact:
Rinse/flush exposed eye(s) gently using water for 15-20 minutes
If symptoms develop or persist, seek medical attention

After swallowing:
Rinse mouth thoroughly
Seek medical attention if irritation, discomfort, or vomiting persists

Most important symptoms and effects, both acute and delayed

Acute symptoms and effects:
Not determined or not applicable.

Delayed symptoms and effects:
Not determined or not applicable.

Immediate medical attention and special treatment

Specific treatment:
Not determined or not applicable.

Notes for the doctor:
Not determined or not applicable.

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SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media:

Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition

Unsuitable extinguishing media:

Not determined or not applicable.

Specific hazards during fire-fighting:

Thermal decomposition can lead to release of irritating gases and vapors

Special protective equipment for firefighters:

Use typical firefighting equipment, self-contained breathing apparatus, special tightly sealed suit

Special precautions:

Carbon monoxide and carbon dioxide may form upon combustion
Heating causes a rise in pressure, risk of bursting and combustion

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation
Ensure air handling systems are operational
Wear protective eye wear, gloves and clothing

Environmental precautions:

Should not be released into the environment
Prevent from reaching drains, sewer or waterway

Methods and material for containment and cleaning up:

Wear protective eye wear, gloves and clothing
Sweep or scoop up solid material while minimizing dust generation
Dispose of contents / container in accordance with local regulations

Reference to other sections:

Not determined or not applicable.

SECTION 7: Handling and storage

Precautions for safe handling:

Use only with adequate ventilation.
Avoid breathing dust.
Do not eat, drink, smoke or use personal products when handling chemical substances.

Conditions for safe storage, including any incompatibilities:

Keep container tightly sealed.
Keep container dry.
Store in a cool, well-ventilated area.

SECTION 8: Exposure controls/personal protection

Only those substances with limit values have been included below.

Occupational Exposure limit values:

Country (Legal Basis)	Substance	Identifier	Permissible concentration
ACGIH	Iron	1309-37-1	ACGIH TLV TWA 5 mg/m³
	Manganese	7439-96-5	ACGIH TLV TWA 0.2 mg/m³

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Country (Legal Basis)	Substance	Identifier	Permissible concentration
	Chromium	7440-47-3	ACGIH TLV TWA: 0.5 mg/m3
	Nickel (solid)	7440-02-0	ACGIH TLV TWA: 1.5 mg/m3 (Inhalable fraction)
	Cobalt	7440-48-4	ACGIH TLV (TWA): 0.02 mg/m3; confirmed animal carcinogen with unknown relevance to humans
United States (OSHA)	Manganese	7439-96-5	OSHA PEL Ceiling 5.0 mg/m³
	Iron	1309-37-1	OSHA PEL TWA 15 mg/m³ (total dust)
	Iron	1309-37-1	OSHA PEL TWA 5 mg/m³ (respirable fraction)
	Iron	1309-37-1	OSHA PEL TWA 10 mg/m³ (Fume)
	Chromium	7440-47-3	OSHA PEL TWA: 1 mg/m3 as Cr for metal and insoluble Cr salts
	Chromium	7440-47-3	OSHA PEL TWA: 0.5 mg/m3 for chromium (II) or (III) compounds
	Nickel (solid)	7440-02-0	OSHA PEL TWA: 1 mg/m3 (The PEL does not apply to Nickel carbonyl.)
	Cobalt	7440-48-4	OSHA PEL (TWA): 0.1 mg/m3
NIOSH	Manganese	7439-96-5	NIOSH REL TWA 1.0 mg/m³
	Manganese	7439-96-5	NIOSH REL ST 3.0 mg/m³
	Iron	1309-37-1	NIOSH REL TWA 5.0 mg/m³
	Chromium	7440-47-3	NIOSH REL: TWA 0.5 mg/m3
	Chromium	7440-47-3	NIOSH IDLH: 250 mg/m3 (as Cr)
	Nickel (solid)	7440-02-0	NIOSH IDLH: 10 mg/m3 (as Ni)
	Nickel (solid)	7440-02-0	NIOSH REL TWA: 0.015 mg/m3 (The REL does not apply to Nickel carbonyl.)
	Cobalt	7440-48-4	NIOSH REL (TWA): 0.05 mg/m3

Biological limit values:

No biological exposure limits noted for the ingredient(s).

Information on monitoring procedures:

Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls.

Biological monitoring may also be appropriate for some substances.

Appropriate engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling.

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.

Personal protection equipment

Eye and face protection:

Safety goggles or glasses, or appropriate eye protection.

Skin and body protection:

Select glove material impermeable and resistant to the substance.

Wear appropriate clothing to prevent any possibility of skin contact.

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Respiratory protection:

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

General hygienic measures:

Avoid contact with skin, eyes and clothing.
Wash hands before breaks and at the end of work.
Wash contaminated clothing before reuse.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Solid
Odor	metallic grey, ranging from dull to bright polished
Odor threshold	Not determined or not available.
pH	Not determined or not available.
Melting point/freezing point	Not determined or not available.
Initial boiling point/range	Not determined or not available.
Flash point (closed cup)	Not determined or not available.
Evaporation rate	Not determined or not available.
Flammability (solid, gas)	Not determined or not available.
Upper flammability/explosive limit	Not determined or not available.
Lower flammability/explosive limit	Not determined or not available.
Vapor pressure	Not determined or not available.
Vapor density	Not determined or not available.
Density	Not determined or not available.
Relative density	Not determined or not available.
Solubilities	Not determined or not available.
Partition coefficient (n-octanol/water)	Not determined or not available.
Auto/Self-ignition temperature	Not determined or not available.
Decomposition temperature	Not determined or not available.
Dynamic viscosity	Not determined or not available.
Kinematic viscosity	Not determined or not available.
Explosive properties	Not determined or not available.
Oxidizing properties	Not determined or not available.

Other information

SECTION 10: Stability and reactivity

Reactivity:

Does not react under normal conditions of use and storage.

Chemical stability:

Stable under normal conditions of use and storage.

Possibility of hazardous reactions:

None under normal conditions of use and storage.

Conditions to avoid:

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None known.

Incompatible materials:

None known.

Hazardous decomposition products:

None known.

SECTION 11: Toxicological information

Acute toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data:

Name	Route	Result
Cobalt	oral	LD50 - Rat - 550 mg/kg

Skin corrosion/irritation

Assessment: Based on available data, the classification criteria are not met.

Product data:

No data available.

Substance data: No data available.

Serious eye damage/irritation

Assessment: Based on available data, the classification criteria are not met.

Product data:

No data available.

Substance data: No data available.

Respiratory or skin sensitization

Assessment: Based on available data, the classification criteria are not met.

Product data:

No data available.

Substance data:

Name	Result
Nickel (solid)	May cause an allergic skin reaction.
Cobalt	Results from the test show that 11 of 15 animals induced with CoCl2 became sensitized to CoCl2, as shown by the challenge, per ECHA.

Carcinogenicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data:

Name	Species	Result
Cobalt		Under the conditions of a 2-year inhalation study, there was clear evidence of carcinogenic activity of cobalt metal in male and female F344/NTac rats based on increased incidences of alveolar/bronchiolar adenoma and carcinoma in the lung. There was clear evidence of carcinogenic activity of cobalt metal in male and female B6C3F1/N mice based on increased incidences of alveolar/bronchiolar neoplasms of the lung (predominantly carcinoma), including multiple carcinoma, per ECHA key study from NTP.

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International Agency for Research on Cancer (IARC):

Name	Classification
Iron	Group 3 - Not classifiable as to its carcinogenicity to humans
Chromium	Group 3 - Not classifiable as to its carcinogenicity to humans

National Toxicology Program (NTP):

Name	Classification
Chromium	Known to be human carcinogens
Nickel (solid)	Reasonably anticipated to be human carcinogens

Germ cell mutagenicity

Assessment: Based on available data, the classification criteria are not met.

Product data:

No data available.

Substance data: No data available.

Reproductive toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data:

No data available.

Substance data:

Name	Result
Cobalt	NOAEL (fertility): 30 mg/kg bw/day per ECHA key study.

Specific target organ toxicity (single exposure)

Assessment: Based on available data, the classification criteria are not met.

Product data:

No data available.

Substance data:

Name	Result
Nickel (solid)	Substance causes damage to organs.

Specific target organ toxicity (repeated exposure)

Assessment: Based on available data, the classification criteria are not met.

Product data:

No data available.

Substance data: No data available.

Aspiration toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data:

No data available.

Substance data: No data available.

Information on likely routes of exposure:

No data available.

Symptoms related to the physical, chemical and toxicological characteristics:

No data available.

Other information:

No data available.

SECTION 12: Ecological information

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Acute (short-term) toxicity

Assessment: Based on available data, the classification criteria are not met.
Product data: No data available.
Substance data: No data available.

Chronic (long-term) toxicity

Product data: No data available.
Substance data: No data available.

Persistence and degradability

Product data: No data available.
Substance data: No data available.

Bioaccumulative potential

Product data: No data available.
Substance data: No data available.

Mobility in soil

Product data: No data available.
Substance data: No data available.

Other adverse effects: No data available.

SECTION 13: Disposal considerations

Disposal methods:

It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities

SECTION 14: Transport information

United States Transportation of dangerous goods (49 CFR DOT)

UN number	Not regulated
UN proper shipping name	Not regulated
UN transport hazard class(es)	None
Packing group	None
Environmental hazards	None
Special precautions for user	None

International Maritime Dangerous Goods (IMDG)

UN number	Not regulated
UN proper shipping name	Not regulated
UN transport hazard class(es)	None
Packing group	None
Environmental hazards	None
Special precautions for user	None

International Air Transport Association Dangerous Goods Regulations (IATA-DGR)

UN number	Not regulated
UN proper shipping name	Not regulated
UN transport hazard class(es)	None
Packing group	None

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Environmental hazards	None
Special precautions for user	None

SECTION 15: Regulatory information

United States regulations

Inventory listing (TSCA):

1309-37-1	Iron	Listed
7440-47-3	Chromium	Listed
7440-02-0	Nickel (solid)	Listed
7439-96-5	Manganese	Listed
7440-48-4	Cobalt	Listed

Significant New Use Rule (TSCA Section 5): Not determined.

Export notification under TSCA Section 12(b): Not determined.

SARA Section 302 extremely hazardous substances: Not determined.

SARA Section 313 toxic chemicals:

7440-47-3	Chromium	Listed
7440-02-0	Nickel (solid)	Listed
7439-96-5	Manganese	Listed
7440-48-4	Cobalt	Not Listed

CERCLA:

7440-47-3	Chromium	Listed	5000
7440-02-0	Nickel (solid)	Listed	100

RCRA: Not determined.

Section 112(r) of the Clean Air Act (CAA): Not determined.

Massachusetts Right to Know:

7440-47-3	Chromium	Listed
7440-02-0	Nickel (solid)	Listed
7439-96-5	Manganese	Listed

New Jersey Right to Know:

7440-47-3	Chromium	Listed
7440-02-0	Nickel (solid)	Listed
7439-96-5	Manganese	Listed

New York Right to Know:

7440-47-3	Chromium	Listed
7440-02-0	Nickel (solid)	Listed
7439-96-5	Manganese	Listed

Pennsylvania Right to Know:

7440-47-3	Chromium	Listed
7440-02-0	Nickel (solid)	Listed
7439-96-5	Manganese	Listed

California Proposition 65:

WARNING: This product contains a chemical known to the State of California to cause cancer.

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7440-02-0	Nickel (solid)
7440-48-4	Cobalt

SECTION 16: Other information

Abbreviations and Acronyms: None

Disclaimer:

This product has been classified in accordance with OSHA HCS 2012 guidelines. The information provided in this SDS is correct, to the best of our knowledge, based on information available. The information given is designed only as a guidance for safe handling, use, storage, transportation and disposal and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials, unless specified in the text. The responsibility to provide a safe workplace remains with the user.

NFPA: 1-0-0-0

HMIS: 1-0-0-0

Initial preparation date: 11.16.2017

End of Safety Data Sheet

Safety Data Sheet

According to Canadian Hazardous Products Regulations and WHMIS 2015

Patterson K Files

SECTION 1: Identification

Product identifier

Product name: Patterson K Files
Product code: 070871418, 070871426, 070871434, 070872010, 070872028, 070872036, 070872044, 070872051, 070872069 070871442, 070871459, 070871467, 070871475, 070871483, 070871491, 070871509, 070871517, 070871525 070872077, 070871533, 070871541, 070871558, 070871566
Additional information: 070872085, 070872093, 070872101, 070872119 070872127, 070872135, 070871574, 070871582, 070871590, 070871608, 070871616, 070871624, 070871632 070871640, 070871657, 070872143, 070871665, 070871673, 070871681, 070871699, 070872150, 070872168 070872176, 070872184, 070872192, 070872200, 070871707, 070871715, 070871723, 070871731, 070871749 070871756, 070872218, 070871798, 070871806, 070871814, 070871822, 070872226, 070872234, 070872242 070872259, 070872267, 070872275, 070871830, 070871848, 070871855

Recommended use of the product and restriction on use

Relevant identified uses: Not determined or not applicable.
Uses advised against: Not determined or not applicable.
Reasons why uses advised against: Not determined or not applicable.

Manufacturer or supplier details

Manufacturer:
Supplier
Patterson Dentaire Canada Inc.
1205 boul Henri-Bourassa West
Montreal (Québec) H3M 3E6
+1 514-745-4040

Emergency telephone number:

Canada
CHEMTREC
Within USA and Canada: 1-800-424-9300 (CHEMTREC, 24 hours)
Outside USA and Canada: +1-703-527-3887 (CHEMTREC, 24 hours)

SECTION 2: Hazard identification

GHS classification: Not a hazardous substance or mixture

Label elements

Hazard pictograms: None

Signal word: None

Hazard statements: None

Precautionary statements: None

Hazards not otherwise classified: None

SECTION 3: Composition/information on ingredients

Identification	Name	Weight %
CAS number: 7440-02-0	Nickel (solid)	9
CAS number: 7440-47-3	Chromium	18
CAS number: 7439-96-5	Manganese	2
CAS number: 7440-48-4	Cobalt	0.75
CAS number: 1309-37-1	Iron	69.5

Additional Information: None

SECTION 4: First-aid measures

Description of first-aid measures

General notes:
Not determined or not available.

After inhalation:
Loosen clothing as necessary and position individual in a comfortable position
Maintain an unobstructed airway
Get medical advice/attention if you feel unwell

After skin contact:
Rinse affected area with soap and water
If symptoms develop or persist, seek medical attention

After eye contact:
Rinse/flush exposed eye(s) gently using water for 15-20 minutes
If symptoms develop or persist, seek medical attention

After ingestion:
Rinse mouth thoroughly
Seek medical attention if irritation, discomfort, or vomiting persists

Most important symptoms and effects, both acute and delayed

Acute symptoms and effects:
Not determined or not available.

Delayed symptoms and effects:
Not determined or not available.

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Immediate medical attention and special treatment

Specific treatment:
Not determined or not available.

Notes for the doctor:
Not determined or not available.

SECTION 5: Fire-fighting measures

Extinguishing media

Suitable extinguishing media:
Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition

Unsuitable extinguishing media:
Not determined or not applicable.

Specific hazards during fire-fighting:
Thermal decomposition can lead to release of irritating gases and vapors

Special protective equipment for firefighters:
Use typical firefighting equipment, self-contained breathing apparatus, special tightly sealed suit

Special precautions:
Carbon monoxide and carbon dioxide may form upon combustion
Heating causes a rise in pressure, risk of bursting and combustion

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:
Ensure adequate ventilation
Ensure air handling systems are operational
Wear protective eye wear, gloves and clothing

Environmental precautions:
Should not be released into the environment
Prevent from reaching drains, sewer or waterway

Methods and material for containment and cleaning up:
Wear protective eye wear, gloves and clothing
Sweep or scoop up solid material while minimizing dust generation
Dispose of contents / container in accordance with local regulations

Reference to other sections:
Not determined or not applicable.

SECTION 7: Handling and storage

Precautions for safe handling:
Use only with adequate ventilation.
Avoid breathing dust.
Do not eat, drink, smoke or use personal products when handling chemical substances.

Conditions for safe storage, including any incompatibilities:
Keep container tightly sealed.
Keep container dry.
Store in a cool, well-ventilated area.

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SECTION 8: Exposure controls/personal protection

Only those substances with limit values have been included below.

Occupational Exposure limit values:

Country (Legal Basis)	Substance	Identifier	Permissible concentration
ACGIH	Iron	1309-37-1	ACGIH TLV TWA 5 mg/m³
United States (OSHA)	Iron	1309-37-1	OSHA PEL TWA 15 mg/m³ (total dust)
NIOSH	Chromium	7440-47-3	NIOSH IDLH: 250 mg/m3 (as Cr)
Canada	Manganese	7439-96-5	Alberta OEL: TWA 0.2 mg/m³ 8-hr
	Manganese	7439-96-5	British Columbia OEL: TWA 0.2 mg/m³ (as Mn) 8-hr
	Manganese	7439-96-5	Ontario OEL: TWA 0.2 mg/m³ (as Mn) 8-hr
	Manganese	7439-96-5	Quebec OEL: TWA 1.0 mg/m³ (Fumes, as Mn) 8-hr; STEL 3.0 mg/m³ (Fumes, as Mn) 15-min; TWA 5.0 mg/m³ 8-hr
	Manganese	7439-96-5	Saskatchewan OEL: TWA 0.2 mg/m³ (as Mn) 8-hr; TWA 0.6 mg/m³ (as Mn) 15-min

Biological limit values:

No biological exposure limits noted for the ingredient(s).

Information on monitoring procedures:

Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls.
Biological monitoring may also be appropriate for some substances.

Appropriate engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling.
Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.

Personal protection equipment

Eye and face protection:

Safety goggles or glasses, or appropriate eye protection.

Skin and body protection:

Select glove material impermeable and resistant to the substance.
Wear appropriate clothing to prevent any possibility of skin contact.

Respiratory protection:

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

General hygienic measures:

Avoid contact with skin, eyes and clothing.
Wash hands before breaks and at the end of work.
Wash contaminated clothing before reuse.

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SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance (physical state, color):	Solid
Odor:	metallic grey, ranging from dull to bright polished
Odor threshold:	Not determined or not available.
pH-value:	Not determined or not available.
Melting/Freezing point:	Not determined or not available.
Boiling point/range:	Not determined or not available.
Flash point:	Not determined or not available.
Evaporation rate:	Not determined or not available.
Flammability (solid, gaseous):	Not determined or not available.
Explosion limit upper:	Not determined or not available.
Explosion limit lower:	Not determined or not available.
Vapor pressure:	Not determined or not available.
Vapor density:	Not determined or not available.
Density:	Not determined or not available.
Relative density:	Not determined or not available.
Solubilities:	Not determined or not available.
Partition coefficient (n-octanol/water):	Not determined or not available.
Auto/Self-ignition temperature:	Not determined or not available.
Decomposition temperature:	Not determined or not available.
Dynamic viscosity:	Not determined or not available.
Kinematic viscosity:	Not determined or not available.
Explosive properties	Not determined or not available.
Oxidizing properties	Not determined or not available.

Other information

SECTION 10: Stability and reactivity

Reactivity:
Does not react under normal conditions of use and storage.

Chemical stability:
Stable under normal conditions of use and storage.

Possibility of hazardous reactions:
None under normal conditions of use and storage.

Conditions to avoid:
None known.

Incompatible materials:
None known.

Hazardous decomposition products:
None known.

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SECTION 11: Toxicological information

Acute toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data:

Name	Route	Result
Cobalt	oral	LD50 - Rat - 550 mg/kg

Skin corrosion/irritation

Assessment: Based on available data, the classification criteria are not met.

Product data:

No data available.

Substance data: No data available.

Serious eye damage/irritation

Assessment: Based on available data, the classification criteria are not met.

Product data:

No data available.

Substance data: No data available.

Respiratory or skin sensitization

Assessment: Based on available data, the classification criteria are not met.

Product data:

No data available.

Substance data:

Name	Result
Nickel (solid)	May cause an allergic skin reaction.
Cobalt	Results from the test show that 11 of 15 animals induced with CoCl2 became sensitized to CoCl2, as shown by the challenge, per ECHA.

Carcinogenicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data:

Name	Species	Result
Cobalt		Under the conditions of a 2-year inhalation study, there was clear evidence of carcinogenic activity of cobalt metal in male and female F344/NTac rats based on increased incidences of alveolar/bronchiolar adenoma and carcinoma in the lung. There was clear evidence of carcinogenic activity of cobalt metal in male and female B6C3F1/N mice based on increased incidences of alveolar/bronchiolar neoplasms of the lung (predominantly carcinoma), including multiple carcinoma, per ECHA key study from NTP.

International Agency for Research on Cancer (IARC):

Name	Classification
Iron	Group 3 - Not classifiable as to its carcinogenicity to humans
Chromium	Group 3 - Not classifiable as to its carcinogenicity to humans

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National Toxicology Program (NTP):

Name	Classification
Chromium	Known to be human carcinogens
Nickel (solid)	Reasonably anticipated to be human carcinogens

Germ cell mutagenicity

Assessment: Based on available data, the classification criteria are not met.

Product data:

No data available.

Substance data: No data available.

Reproductive toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data:

No data available.

Substance data:

Name	Result
Cobalt	NOAEL (fertility): 30 mg/kg bw/day per ECHA key study.

Specific target organ toxicity (single exposure)

Assessment: Based on available data, the classification criteria are not met.

Product data:

No data available.

Substance data:

Name	Result
Nickel (solid)	Substance causes damage to organs.

Specific target organ toxicity (repeated exposure)

Assessment: Based on available data, the classification criteria are not met.

Product data:

No data available.

Substance data: No data available.

Aspiration toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data:

No data available.

Substance data: No data available.

Information on likely routes of exposure:

No data available.

Symptoms related to the physical, chemical and toxicological characteristics:

No data available.

Other information:

No data available.

SECTION 12: Ecological information

Acute (short-term) toxicity

Assessment: Based on available data, the classification criteria are not met.

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Product data: No data available.
Substance data: No data available.

Chronic (long-term) toxicity

Product data: No data available.
Substance data: No data available.

Persistence and degradability

Product data: No data available.
Substance data: No data available.

Bioaccumulative potential

Product data: No data available.
Substance data: No data available.

Mobility in soil

Product data: No data available.
Substance data: No data available.

Other adverse effects: No data available.

SECTION 13: Disposal considerations

Disposal methods:

It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities

SECTION 14: Transport information

Canadian Transportation of Dangerous Goods (TDG)

UN number	Not regulated
UN proper shipping name	Not regulated
UN transport hazard class(es)	None
Packing group	None
Environmental hazards	None
Special precautions for user	None

International Maritime Dangerous Goods (IMDG)

UN number	Not regulated
UN proper shipping name	Not regulated
UN transport hazard class(es)	None
Packing group	None
Environmental hazards	None
Special precautions for user	None

International Air Transport Association Dangerous Goods Regulations (IATA-DGR)

UN number	Not regulated
UN proper shipping name	Not regulated

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UN transport hazard class(es)	None
Packing group	None
Environmental hazards	None
Special precautions for user	None

SECTION 15: Regulatory information

Canada regulations

Domestic substances list (DSL):

1309-37-1	Iron	Listed
7440-47-3	Chromium	Listed
7440-02-0	Nickel (solid)	Listed
7439-96-5	Manganese	Listed
7440-48-4	Cobalt	Listed

Non-domestic substances list (NDSL): Not determined.

SECTION 16: Other information

Abbreviations and Acronyms: None

Disclaimer:

This product has been classified in accordance with the Canadian Hazardous Products Regulations and WHMIS 2015. The information provided in this SDS is correct, to the best of our knowledge, based on information available. The information given is designed only as a guidance for safe handling, use, storage, transportation and disposal and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials, unless specified in the text. The responsibility to provide a safe workplace remains with the user.

NFPA: 1-0-0-0

HMIS: 1-0-0-0

Initial preparation date: 11.16.2017

End of Safety Data Sheet