

SAFETY DATA SHEETS

This SDS packet was issued with item:

070872259

The safety data sheets (SDS) in this packet apply to one or more components included in the items listed below. Items listed below may require one or more SDS. Please refer to invoice for specific item number(s).

070871418 070871426 070871434 070871442 070871459 070871467 070871475 070871483 070871491 070871509
070871517 070871525 070871533 070871541 070871558 070871566 070871574 070871582 070871590 070871608
070871616 070871624 0708716322 070871640 070871657 070871665 070871673 070871681 070871699 070871707
070871715 070871723 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



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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, 070872077, 070871533, 070871541, 070871558, 070871566, 070872085, 070872093, 070872101, 070872119 070872127, 070872135, 070871574, 070871582, 070871590, 070871608, 070871616, 070871624, 070871632 070871640, 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:

United States

Patterson Companies, Inc.
1031 Mendota Heights Road
St. Paul, MN 55120
1-800-328-5536
www.pattersoncompanies.com

Emergency telephone number:

United States

CHEMTREC

Within USA and Canada: 1-800-424-9300 (24 hours)

SECTION 2: Hazard(s) identification

GHS classification:

Eye irritation, category 2A

Skin sensitization, category 1

Respiratory sensitization, category 1

Carcinogenicity, category 1B

Reproductive toxicity, category 1B

Specific target organ toxicity - repeated exposure, category 1

Label elements

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Hazard pictograms:



Signal word: Danger

Hazard statements:

- H319 Causes serious eye irritation
- H317 May cause an allergic skin reaction
- H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled
- H350 May cause cancer
- H360 May damage fertility or the unborn child
- H372 Causes damage to organs through prolonged or repeated exposure

Precautionary statements:

- P201 Obtain special instructions before use
- P202 Do not handle until all safety precautions have been read and understood
- P260 Do not breathe dust/fume/gas
- P264 Wash skin thoroughly after handling
- P270 Do not eat, drink or smoke when using this product
- P272 Contaminated work clothing must not be allowed out of the workplace
- P280 Wear protective gloves/protective clothing/eye protection/face protection
- P284 Wear respiratory protection
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- P337+P313 If eye irritation persists: Get medical advice/attention
- P302+P352 IF ON SKIN: Wash with plenty of water
- P333+P313 If skin irritation or rash occurs: Get medical advice/attention
- P321 Specific treatment (see first aid instructions on this label)
- P363 Wash contaminated clothing before reuse
- P304+P341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing
- P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor
- P308+P313 IF exposed or concerned: Get medical advice/attention
- P314 Get medical advice/attention if you feel unwell
- P405 Store locked up
- P501 Dispose of contents/container in accordance with all local, regional, state and federal regulations.

Hazards not otherwise classified: None

SECTION 3: Composition/information on ingredients

Identification	Name	Weight %
CAS number: 1309-37-1	Diiron trioxide	69.5
CAS number: 7440-47-3	Chromium	18
CAS number: 7440-02-0	Nickel	9

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CAS number: 7439-96-5	Manganese	2
CAS number: 7440-48-4	Cobalt	0.75

Additional Information: None

SECTION 4: First aid measures

Description of first aid measures

General notes:

Show this Safety Data Sheet to the doctor in attendance.

After inhalation:

If inhaled, remove person to fresh air and place in a position comfortable for breathing. Keep person at rest. If breathing is difficult, administer oxygen. If breathing has stopped, provide artificial respiration. If symptoms develop or persist, seek medical advice/attention.

After skin contact:

Remove contaminated clothing and shoes. Rinse skin with copious amounts of water [shower] for several minutes. Launder contaminated clothing before reuse. If symptoms develop or persist, seek medical advice/attention.

After eye contact:

Rinse eyes with plenty of gently flowing lukewarm water for 15 minutes. Remove contact lenses if present and easy to do so. Protect unexposed eye. If symptoms develop or persist, seek medical advice/attention.

After swallowing:

If swallowed, DO NOT induce vomiting unless told to do so by a physician or poison control center. Rinse mouth with water. Never give anything by mouth to an unconscious person. If spontaneous vomiting occurs, place on the left side with head down to prevent aspiration of liquid into the lungs. If symptoms develop or persist, seek medical advice/attention.

Most important symptoms and effects, both acute and delayed

Acute symptoms and effects:

Eye contact may result in irritation, redness, pain, inflammation, itching, burning and tearing.

Dermal exposure may cause an allergic skin reaction. Symptoms may include irritation, redness, pain, rash, inflammation, itching, burning and dermatitis.

Inhalation exposure may cause allergy, asthma symptoms or breathing difficulties. Symptoms may include cough, chronic phlegm, shortness of breath, wheezing and chest tightness. Symptoms may be delayed.

Delayed symptoms and effects:

Exposure may cause cancer. Effects are dependent on exposure (dose, concentration, contact time).

Causes damage to organs through prolonged or repeated exposure. Effects are dependent on exposure (dose, concentration, contact time).

Long term exposure may affect fertility. Symptoms include, but are not limited to: menstrual problems, altered sexual behavior/fertility/ and pregnancy outcome. Long term exposure may also affect development of the unborn child. Symptoms include, but are not limited to: intrauterine growth retardation, pre-term birth, birth defects and postnatal death.

Immediate medical attention and special treatment

Specific treatment:

Not determined or not applicable.

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Notes for the doctor:

Treat symptomatically.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media:

Water mist/fog, carbon dioxide, dry chemical or alcohol resistant foam.

Unsuitable extinguishing media:

Do not use water jet.

Specific hazards during fire-fighting:

Thermal decomposition may produce irritating/toxic fumes/gases.

Special protective equipment for firefighters:

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full-face piece operated in positive pressure mode.

Special precautions:

Avoid contact with skin, eyes, hair and clothing. Do not breathe fumes/gas/mists/aerosols/vapors/dusts. Move containers from fire area if safe to do so. Use water spray/fog for cooling fire exposed containers. Avoid unnecessary run-off of extinguishing media which may cause pollution.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Evacuate unnecessary personnel. Ventilate area. Extinguish any sources of ignition. Wear recommended personal protective equipment (see Section 8). Do not get on skin, eyes or on clothing. Avoid breathing mist, vapor, dust, fume and spray. Do not walk through spilled material. Wash thoroughly after handling. Remove contaminated clothing and launder before reuse.

Environmental precautions:

Prevent further leakage or spillage if safe to do so. Prevent from reaching drains, sewers and waterways. Discharge into the environment must be avoided.

Methods and material for containment and cleaning up:

Do not touch damaged containers or spilled material unless wearing appropriate personal protective clothing. Avoid breathing dust, mist, fumes, vapors or spray. Stop leak if you can do it without risk. Contain and collect spillage and place in suitable container for future disposal. Dispose of in accordance with all applicable regulations (see Section 13).

Reference to other sections:

For personal protective equipment see Section 8. For disposal see Section 13.

SECTION 7: Handling and storage

Precautions for safe handling:

Use appropriate personal protective equipment (see Section 8). Use only with adequate ventilation. Avoid breathing mist/vapor/spray/dust. Do not eat, drink, smoke, or use personal products when handling chemical substances. Avoid contact with skin, eyes and clothing. Wash affected areas thoroughly after handling. Keep away from incompatible materials (See Section 10). Keep containers tightly closed when not in use.

Conditions for safe storage, including any incompatibilities:

Store in cool, dry, well-ventilated location out of direct sunlight. Keep away from food and beverages. Protect from freezing and physical damage. Store away from heat, open flames and other sources of ignition. Keep container tightly sealed. Store away from incompatible materials (See Section 10).

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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
OSHA	Diiron trioxide	1309-37-1	8-Hour TWA-PEL: 10 mg/m ³ (fume)
	Chromium	7440-47-3	8-Hour TWA-PEL: 1 mg/m ³ (Chromium, Metal & Insoluble Salts as Cr)
	Chromium	7440-47-3	8-Hour TWA-PEL: 0.5 mg/m ³ (for chromium (II) or (III) compounds)
	Chromium	7440-47-3	8-Hour TWA-PEL: 0.005 mg/m ³ (for chromium VI and chromium oxides)
	Chromium	7440-47-3	Level Limit Value: 0.0025 mg/m ³ (for chromium VI and chromium oxides - Immediate Action Level)
	Nickel	7440-02-0	8-Hour TWA-PEL: 1 mg/m ³ (As Ni)
	Manganese	7439-96-5	Ceiling Limit: 5 mg/m ³
	Manganese	7439-96-5	TWA: 1 mg/m ³ ([Fume.])
	Cobalt	7440-48-4	8-Hour TWA-PEL: 0.1 mg/m ³ (dust and fume)
ACGIH	Diiron trioxide	1309-37-1	8-Hour TWA: 5 mg/m ³ (respirable particulate matter)
	Chromium	7440-47-3	8-Hour TWA: 0.5 mg/m ³ (inhalable particulate matter - Chromium, Metal & Insoluble Salts as Cr)
	Chromium	7440-47-3	8-Hour TWA: 0.0002 mg/m ³ (for chromium VI and chromium oxides - inhalable particulate matter)
	Chromium	7440-47-3	15-Minute STEL: 0.0005 mg/m ³ (for chromium VI and chromium oxides - inhalable particulate matter)
	Nickel	7440-02-0	8-Hour TWA: 1.5 mg/m ³ (Inhalable Fraction)
	Manganese	7439-96-5	8-Hour TWA: 0.02 mg/m ³ (respirable particulate matter)
	Manganese	7439-96-5	8-Hour TWA: 0.1 mg/m ³ (inhalable particulate matter)
	Cobalt	7440-48-4	8-Hour TWA: 0.02 mg/m ³ (inhalable particulate matter)
NIOSH	Diiron trioxide	1309-37-1	REL-TWA: 5 mg/m ³ (up to 10 hrs.)
	Diiron trioxide	1309-37-1	IDLH: 2500 mg/m ³
	Chromium	7440-47-3	REL-TWA: 0.5 mg/m ³ (Chromium, Metal & Insoluble Salts as Cr)
	Chromium	7440-47-3	IDLH: 250 mg/m ³ (Chromium, Metal & Insoluble Salts as Cr)

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Country (Legal Basis)	Substance	Identifier	Permissible concentration
	Chromium	7440-47-3	REL-TWA: 0.0002 mg/m ³ (for chromium VI and chromium oxides)
	Nickel	7440-02-0	REL: 0.01 mg/m ³ (As Ni, for up to a 10-h workday during a 40 h workweek)
	Nickel	7440-02-0	IDLH: 10 mg/m ³
	Manganese	7439-96-5	REL-TWA: 1 mg/m ³ (up to 10 hrs.)
	Manganese	7439-96-5	15-Minute STEL: 3 mg/m ³
	Manganese	7439-96-5	IDLH: 500 mg/m ³
	Manganese	7439-96-5	IDLH: 500 mg/m ³
	Manganese	7439-96-5	STEL: 3 mg/m ³
	Manganese	7439-96-5	REL: 1 mg/m ³
	Cobalt	7440-48-4	REL-TWA: 0.05 mg/m ³ (dust and fume - up to 10 hrs.)
	Cobalt	7440-48-4	IDLH: 20 mg/m ³ (dust and fume)
	Cobalt	7440-48-4	IDLH: 20 mg/m ³ (dust and fume)
United States(California)	Manganese	7439-96-5	8-Hour TWA: 0.2 mg/m ³
	Manganese	7439-96-5	15-Minute STEL: 3 mg/m ³
	Manganese	7439-96-5	STEL: 3 mg/m ³
	Manganese	7439-96-5	PEL: 0.2 mg/m ³
	Manganese	7439-96-5	REL: 0.09 ug/m ³ (Chronic Inhalation)

Biological limit values:

Country (Legal Basis)	Substance	Identifier	Determinant	Specimen	Sampling time	Permissible limits
ACGIH	Cobalt	7440-48-4	Cobalt	Urine	End of shift at end of work week	15 ug/L

Information on monitoring procedures:

Not determined or not applicable.

Appropriate engineering controls:

Emergency eye wash stations and safety showers should be available in the immediate vicinity of use or handling. Provide adequate ventilation to maintain the airborne concentrations of vapor, mists, and/or dusts below the applicable workplace exposure limits, while observing recognized national standards (or equivalent).

Personal protection equipment

Eye and face protection:

Safety glasses or goggles. Use eye protection equipment that has been tested and approved by recognized national standards (or equivalent).

Skin and body protection:

Chemical resistant, impervious gloves approved by the appropriate standards. Gloves must be inspected prior to use. Avoid skin contact with used gloves. Appropriate techniques should be used to remove used gloves and contaminated clothing. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Ensure that all personal protective equipment is approved by recognized national

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standards (or equivalent).

Respiratory protection:

If engineering controls do not maintain airborne concentrations below the applicable workplace exposure limits, or to an acceptable level (if exposure limits have not been established), a respirator approved by recognized national standards (or equivalent) must be worn. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

General hygienic measures:

When handling chemical products, do not eat, drink or smoke. Wash hands after handling, before breaks, and at the end of the workday. Avoid contact with skin, eyes and clothing. Wash contaminated clothing before reuse. Perform routine housekeeping.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Metallic grey solid, ranging from dull to bright polished.
Odor	Not determined or not available.
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:

Not reactive under recommended handling and storage conditions.

Chemical stability:

Stable under recommended handling and storage conditions.

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Possibility of hazardous reactions:

Hazardous reactions are not anticipated under recommended conditions of handling and storage.

Conditions to avoid:

Extreme heat, open flames, hot surfaces, sparks, ignition sources and incompatible materials.

Incompatible materials:

Strong oxidizing agents.

Hazardous decomposition products:

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

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
Diiron trioxide	oral	LD50 Rat: > 5000 mg/kg
	inhalation	LC50 Rat: 5.05 mg/L (4 hr (aerosol))
Chromium	oral	LD50 Rat: >3400 mg/kg
	inhalation	LC50 Rat: >5.41 mg/L (4 h Aerosol)
Manganese	oral	LD50 Rat: 9000 mg/kg
Cobalt	oral	LD50 Rat: 550 mg/kg
	inhalation	LC50 Rat: <0.05 mg/L (4 hours)
	dermal	LD50 Rabbit: >2000 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:

Causes serious eye irritation.

Product data:

No data available.

Substance data:

Name	Result
Chromium	Causes serious eye irritation.
Cobalt	Causes serious eye irritation

Respiratory or skin sensitization

Assessment:

May cause an allergic skin reaction.

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

Product data:

No data available.

Substance data:

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Name	Result
Chromium	May cause an allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Nickel	May cause an allergic skin reaction.
Cobalt	May cause allergy or asthma symptoms or breathing difficulties if inhaled May cause an allergic skin reaction

Carcinogenicity

Assessment:

May cause cancer.

Product data: No data available.

Substance data:

Name	Species	Result
Nickel		Suspected of causing cancer.
Cobalt	Rats & Mice	Chronic inhalation exposure to cobalt metal has caused lung cancer in rats and mice, as well as systemic tumors in rats.

International Agency for Research on Cancer (IARC):

Name	Classification
Diiron trioxide	Group 3
Chromium	Group 3
Nickel	Group 2B
Manganese	Not Applicable
Cobalt	Group 2B

National Toxicology Program (NTP):

Name	Classification
Diiron trioxide	Not Applicable
Chromium	Known to be human carcinogens
Nickel	Reasonably anticipated to be human carcinogens
Manganese	Not Applicable
Cobalt	Reasonably anticipated to be human carcinogens

OSHA Carcinogens: Not applicable

Germ cell mutagenicity

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

Product data:

No data available.

Substance data:

Name	Result
Cobalt	Suspected of causing genetic defects.

Reproductive toxicity

Assessment:

May damage fertility or the unborn child.

Product data:

No data available.

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Substance data:

Name	Result
Cobalt	May damage fertility.

Specific target organ toxicity (single exposure)

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

Product data:

No data available.

Substance data: No data available.

Specific target organ toxicity (repeated exposure)

Assessment:

Causes damage to organs through prolonged or repeated exposure.

Product data:

No data available.

Substance data:

Name	Result
Nickel	Causes damage to organs (lungs) through prolonged or repeated exposure.
Cobalt	Repeated overexposure to cobalt compounds can produce reduced pulmonary function, diffuse nodular fibrosis of lungs and respiratory hypersensitivity.

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:

Inhalation, Ingestion, Skin contact, Eye contact.

Symptoms related to the physical, chemical and toxicological characteristics:

Refer to Section 4 of this SDS.

Other information:

No data available.

SECTION 12: Ecological information

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

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

Product data: No data available.

Substance data: No data available.

Persistence and degradability

Product data: No data available.

Substance data:

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Name	Result
Chromium	The rules for biodegradability of organic substances do not generally apply to Chromium, as it is a natural trace element and essential metal to many life forms.

Bioaccumulative potential

Product data: No data available.

Substance data:

Name	Result
Chromium	The rules for bioaccumulation of organic substances do not generally apply to Chromium, as it is a natural trace element and essential metal to many life forms.

Mobility in soil

Product data: No data available.

Substance data:

Name	Result
Chromium	Metallic Chromium is insoluble in soil, and given the abundance presence of it in the environment, its ecotoxicity potential is very low.

Results of PBT and vPvB assessment

Product data:

PBT assessment: This product does not contain any substances that are assessed to be a PBT.

vPvB assessment: This product does not contain any substances that are assessed to be a vPvB.

Substance data:

PBT assessment:

Chromium	The substance is not PBT.
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vPvB assessment:

Chromium	The Substance is not vPvB.
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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

Contaminated packages:

Not determined or not applicable.

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)

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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
Environmental hazards	None
Special precautions for user	None

SECTION 15: Regulatory information

United States regulations

Inventory listing (TSCA): All ingredients are listed or exempt.

Significant New Use Rule (TSCA Section 5): None of the ingredients are listed.

Export notification under TSCA Section 12(b): None of the ingredients are listed.

SARA Section 302 extremely hazardous substances: None of the ingredients are listed.

SARA Section 313 toxic chemicals:

7440-47-3	Chromium	Listed
7440-02-0	Nickel	Listed
7439-96-5	Manganese	Listed
7440-48-4	Cobalt	Listed

CERCLA:

7440-47-3	Chromium	Listed	5000 lb
7440-02-0	Nickel	Listed	100 lb

RCRA:

7440-47-3	Chromium	Listed	D007
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Section 112(r) of the Clean Air Act (CAA): None of the ingredients are listed.

Massachusetts Right to Know:

1309-37-1	Diiron trioxide	Listed
7440-47-3	Chromium	Listed
7440-02-0	Nickel	Listed
7439-96-5	Manganese	Listed
7439-96-5	Manganese	Listed
7440-48-4	Cobalt	Listed

New Jersey Right to Know:

1309-37-1	Diiron trioxide	Listed
7440-47-3	Chromium	Listed
7440-02-0	Nickel	Listed

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7439-96-5	Manganese	Listed
7439-96-5	Manganese	Listed
7440-48-4	Cobalt	Listed


New York Right to Know:

1309-37-1	Diiron trioxide	Listed
7440-47-3	Chromium	Listed
7440-02-0	Nickel	Listed
7439-96-5	Manganese	Listed
7439-96-5	Manganese	Listed
7440-48-4	Cobalt	Listed

Pennsylvania Right to Know:

1309-37-1	Diiron trioxide	Listed
7440-47-3	Chromium	Listed
7440-02-0	Nickel	Listed
7439-96-5	Manganese	Listed
7439-96-5	Manganese	Listed
7440-48-4	Cobalt	Listed

California Proposition 65:

 **WARNING:** This product can expose you to chemicals including Nickel and Cobalt which are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

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: 2-0-0

HMIS: 2*-0-0

Initial preparation date: 10.27.2020

Revision Notes:

Revision Date	Notes
2020-08-03	Version 2

End of Safety Data Sheet

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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, 070872077, 070871533, 070871541, 070871558, 070871566, 070872085, 070872093, 070872101, 070872119 070872127, 070872135, 070871574, 070871582, 070871590, 070871608, 070871616, 070871624, 070871632 070871640, 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:

United States

Patterson Companies, Inc.
1031 Mendota Heights Road
St. Paul, MN 55120
1-800-328-5536
www.pattersoncompanies.com

Supplier:

Canada

Patterson Dentaire Canada Inc.
1205 boul Henri-Bourassa West
Montreal, Quebec H3M 3E6
+1 514-745-4040

Emergency telephone number:

Canada

CHEMTREC

Within USA and Canada: 1-800-424-9300 (24 hours)

Outside USA and Canada: +1-703-527-3887 (24 hours)

SECTION 2: Hazard identification

GHS classification:

Eye irritation, category 2A

Skin sensitization, category 1

Respiratory sensitization, category 1

Carcinogenicity, category 1

Reproductive toxicity, category 1

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Specific target organ toxicity - repeated exposure, category 1

Label elements

Hazard pictograms:



Signal word: Danger

Hazard statements:

- H319 Causes serious eye irritation
- H317 May cause an allergic skin reaction
- H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled
- H350 May cause cancer
- H360 May damage fertility or the unborn child
- H372 Causes damage to organs through prolonged or repeated exposure.

Precautionary statements:

- P201 Obtain special instructions before use
- P202 Do not handle until all safety precautions have been read and understood
- P260 Do not breathe dust/fume/gas
- P264 Wash hands thoroughly after handling
- P280 Wear protective gloves/protective clothing/eye protection/face protection
- P270 Do not eat, drink or smoke when using this product
- P272 Contaminated work clothing should not be allowed out of the workplace
- P261 Avoid breathing dust/fume/gas/mist/vapours/spray
- P284 In case of inadequate ventilation wear respiratory protection
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- P337+P313 If eye irritation persists: Get medical advice/attention
- P302+P352 IF ON SKIN: Wash with plenty of water
- P333+P313 If skin irritation or rash occurs: Get medical advice/attention
- P321 Specific treatment (see first aid instructions on this label)
- P363 Wash contaminated clothing before reuse
- P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing
- P308+P313 IF exposed or concerned: Get medical advice/attention
- P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor
- P314 Get medical advice/attention if you feel unwell
- P405 Store locked up
- P501 Dispose of contents/container in accordance with all local, regional, state and federal regulations.

Hazards not otherwise classified:

None

SECTION 3: Composition/information on ingredients

Identification	Name	Weight %
CAS number: 1309-37-1	Diiron trioxide	69.5

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CAS number: 7440-47-3	Chromium	18
CAS number: 7440-02-0	Nickel	9
CAS number: 7439-96-5	Manganese	2
CAS number: 7440-48-4	Cobalt	0.75

Additional Information: None

SECTION 4: First-aid measures

Description of first-aid measures

General notes:

Show this Safety Data Sheet to the doctor in attendance.

After inhalation:

If inhaled, remove person to fresh air and place in a position comfortable for breathing. Keep person at rest. If breathing is difficult, administer oxygen. If breathing has stopped, provide artificial respiration. If symptoms develop or persist, seek medical advice/attention.

After skin contact:

Remove contaminated clothing and shoes. Rinse skin with copious amounts of water [shower] for several minutes. Launder contaminated clothing before reuse. If symptoms develop or persist, seek medical advice/attention.

After eye contact:

Rinse eyes with plenty of gently flowing lukewarm water for 15 minutes. Remove contact lenses if present and easy to do so. Protect unexposed eye. If symptoms develop or persist, seek medical advice/attention.

After ingestion:

If swallowed, DO NOT induce vomiting unless told to do so by a physician or poison control center. Rinse mouth with water. Never give anything by mouth to an unconscious person. If spontaneous vomiting occurs, place on the left side with head down to prevent aspiration of liquid into the lungs. If symptoms develop or persist, seek medical advice/attention.

Most important symptoms and effects, both acute and delayed

Acute symptoms and effects:

Eye contact may result in irritation, redness, pain, inflammation, itching, burning and tearing.

Dermal exposure may cause an allergic skin reaction. Symptoms may include irritation, redness, pain, rash, inflammation, itching, burning and dermatitis.

Inhalation exposure may cause allergy, asthma symptoms or breathing difficulties. Symptoms may include cough, chronic phlegm, shortness of breath, wheezing and chest tightness. Symptoms may be delayed.

Delayed symptoms and effects:

Exposure may cause cancer. Effects are dependent on exposure (dose, concentration, contact time).

Causes damage to organs through prolonged or repeated exposure. Effects are dependent on exposure (dose, concentration, contact time).

Long term exposure may affect fertility. Symptoms include, but are not limited to: menstrual problems, altered sexual behavior/fertility/ and pregnancy outcome. Long term exposure may also affect

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development of the unborn child. Symptoms include, but are not limited to: intrauterine growth retardation, pre-term birth, birth defects and postnatal death.

Immediate medical attention and special treatment

Specific treatment:

None known.

Notes for the doctor:

Treat symptomatically.

SECTION 5: Fire-fighting measures

Extinguishing media

Suitable extinguishing media:

Alcohol- resistant foam, Dry chemical or Carbon dioxide

Unsuitable extinguishing media:

Do not use water jet.

Specific hazards during fire-fighting:

Thermal decomposition may produce irritating/toxic fumes/gases.

Special protective equipment for firefighters:

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full-face piece operated in positive pressure mode.

Special precautions:

Avoid contact with skin, eyes, hair and clothing. Do not breathe fumes/gas/mists/aerosols/vapors/dusts. Move containers from fire area if safe to do so. Use water spray/fog for cooling fire exposed containers. Avoid unnecessary run-off of extinguishing media which may cause pollution.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Evacuate unnecessary personnel. Ventilate area. Extinguish any sources of ignition. Wear recommended personal protective equipment (see Section 8). Do not get on skin, eyes or on clothing. Avoid breathing mist, vapor, dust, fume and spray. Do not walk through spilled material. Wash thoroughly after handling. Remove contaminated clothing and launder before reuse.

Environmental precautions:

Prevent further leakage or spillage if safe to do so. Prevent from reaching drains, sewers and waterways. Discharge into the environment must be avoided.

Methods and material for containment and cleaning up:

Do not touch damaged containers or spilled material unless wearing appropriate personal protective clothing. Avoid breathing dust, mist, fumes, vapors or spray. Stop leak if you can do it without risk. Contain and collect spillage and place in suitable container for future disposal. Dispose of in accordance with all applicable regulations (see Section 13).

Reference to other sections:

For personal protective equipment see Section 8. For disposal see Section 13.

SECTION 7: Handling and storage

Precautions for safe handling:

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Use appropriate personal protective equipment (see Section 8). Use only with adequate ventilation. Avoid breathing mist/vapor/spray/dust. Do not eat, drink, smoke, or use personal products when handling chemical substances. Avoid contact with skin, eyes and clothing. Wash affected areas thoroughly after handling. Keep away from incompatible materials (See Section 10). Keep containers tightly closed when not in use.

Conditions for safe storage, including any incompatibilities:

Store in cool, dry, well-ventilated location out of direct sunlight. Keep away from food and beverages. Protect from freezing and physical damage. Store away from heat, open flames and other sources of ignition. Keep container tightly sealed. Store away from incompatible materials (See Section 10).

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
Alberta	Diiron trioxide	1309-37-1	8-Hour TWA: 5 mg/m ³ ((Respirable))
	Chromium	7440-47-3	8-Hour TWA: 0.5 mg/m ³ (Metal Chromium and Cr III compounds, as Cr.)
	Manganese	7439-96-5	TWA: 0.2 mg/m ³
	Cobalt	7440-48-4	8-Hour TWA: 0.02 mg/m ³
British Columbia	Diiron trioxide	1309-37-1	8-Hour TWA: 5 mg/m ³ ((Dust and fume))
	Chromium	7440-47-3	8-Hour TWA: 0.5 mg/m ³ (Metal Chromium (Total))
	Manganese	7439-96-5	TWA: 0.2 mg/m ³
	Cobalt	7440-48-4	8-Hour TWA: 0.02 mg/m ³
Manitoba	Diiron trioxide	1309-37-1	8-Hour TWA: 5 mg/m ³ ((Respirable fraction))
	Chromium	7440-47-3	8-Hour TWA: 0.5 mg/m ³ (Inhalable Fraction)
	Cobalt	7440-48-4	8-Hour TWA: 0.02 mg/m ³
Ontario	Diiron trioxide	1309-37-1	8-Hour TWA: 5 mg/m ³ ((Respirable fraction))
	Chromium	7440-47-3	8-Hour TWA: 0.5 mg/m ³ (Metal Chromium and Inorganic Cr III compounds, as Cr.)
	Manganese	7439-96-5	TWA: 0.2 mg/m ³
	Cobalt	7440-48-4	8-Hour TWA: 0.02 mg/m ³
Quebec	Diiron trioxide	1309-37-1	8-Hour TWA: 5 mg/m ³ ((Dust and fume))
	Chromium	7440-47-3	8-Hour TWA: 0.5 mg/m ³
	Manganese	7439-96-5	TWA: 0.2 mg/m ³
	Cobalt	7440-48-4	8-Hour TWA: 0.02 mg/m ³
Saskatchewan	Diiron trioxide	1309-37-1	15-Minute STEL: 10 mg/m ³ ((Dust and fume))

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Country (Legal Basis)	Substance	Identifier	Permissible concentration
	Diiron trioxide	1309-37-1	8-Hour TWA: 5 mg/m ³ ((Dust and fume))
	Chromium	7440-47-3	8-Hour TWA: 0.5 mg/m ³ (Metal Chromium and Cr III compounds.)
	Chromium	7440-47-3	15-Minute STEL: 15 mg/m ³ (Metal Chromium and Cr III compounds.)
	Manganese	7439-96-5	15-Minute Contamination Limit: 0.6 mg/m ³
	Manganese	7439-96-5	8-Hour Contamination Limit: 0.2 mg/m ³
	Cobalt	7440-48-4	8-Hour TWA: 0.02 mg/m ³
	Cobalt	7440-48-4	15-Minute STEL: 0.06 mg/m ³
Canada	Nickel	7440-02-0	8-Hour TWA: 1.5 mg/m ³ (Alberta)
	Nickel	7440-02-0	8-Hour TWA: 0.01 mg/m ³ (British Columbia, as Ni)
	Nickel	7440-02-0	8-Hour TWA: 1.5 mg/m ³ (Manitoba, as Ni)
	Nickel	7440-02-0	8-Hour TWA: 1 mg/m ³ (Ontario, as Ni)
	Nickel	7440-02-0	8-Hour TWA: 1 mg/m ³ (Quebec)
	Nickel	7440-02-0	8-Hour TWA: 1.5 mg/m ³ (Saskatchewan, as Ni, Inhalable Fraction)
	Nickel	7440-02-0	15-Minute STEL: 3 mg/m ³ (Saskatchewan, as Ni, Inhalable Fraction)
	Manganese	7439-96-5	8-Hour TWA: 0.2 mg/m ³ (Alberta)
	Manganese	7439-96-5	8-Hour TWA: 0.2 mg/m ³ (British Columbia, as Mn)
	Manganese	7439-96-5	8-Hour TWA: 0.2 mg/m ³ (Ontario, as Mn)
	Manganese	7439-96-5	8-Hour TWA: 1 mg/m ³ (Quebec, Fumes, as Mn)
	Manganese	7439-96-5	15-Minute STEL: 3 mg/m ³ (Quebec, Fumes, as Mn)
	Manganese	7439-96-5	8-Hour TWA: 5 mg/m ³ (Quebec)
	Manganese	7439-96-5	8-Hour TWA: 0.2 mg/m ³ (Saskatchewan, as Mn)
	Manganese	7439-96-5	15-Minute STEL: 0.6 mg/m ³ (Saskatchewan, as Mn)

Biological limit values:

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

Information on monitoring procedures:

Not determined or not applicable.

Appropriate engineering controls:

Emergency eye wash stations and safety showers should be available in the immediate vicinity of use or handling. Provide adequate ventilation to maintain the airborne concentrations of vapor, mists, and/or dusts

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below the applicable workplace exposure limits, while observing recognized national standards (or equivalent).

Personal protection equipment

Eye and face protection:

Safety glasses or goggles. Use eye protection equipment that has been tested and approved by recognized national standards (or equivalent).

Skin and body protection:

Chemical resistant, impervious gloves approved by the appropriate standards. Gloves must be inspected prior to use. Avoid skin contact with used gloves. Appropriate techniques should be used to remove used gloves and contaminated clothing. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Ensure that all personal protective equipment is approved by recognized national standards (or equivalent).

Respiratory protection:

If engineering controls do not maintain airborne concentrations below the applicable workplace exposure limits, or to an acceptable level (if exposure limits have not been established), a respirator approved by recognized national standards (or equivalent) must be worn. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

General hygienic measures:

When handling chemical products, do not eat, drink or smoke. Wash hands after handling, before breaks, and at the end of the workday. Avoid contact with skin, eyes and clothing. Wash contaminated clothing before reuse. Perform routine housekeeping.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance (physical state, color):	Metallic grey solid, ranging from dull to bright polished.
Odor:	Not determined or not available.
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.

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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:

Not reactive under recommended handling and storage conditions.

Chemical stability:

Stable under recommended handling and storage conditions.

Possibility of hazardous reactions:

Hazardous reactions are not anticipated under recommended conditions of handling and storage.

Conditions to avoid:

Extreme heat, open flames, hot surfaces, sparks, ignition sources and incompatible materials.

Incompatible materials:

Strong oxidizing agents.

Hazardous decomposition products:

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

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
Diiron trioxide	oral	LD50 Rat: > 5000 mg/kg
	inhalation	LC50 Rat: 5.05 mg/L (4 hr (aerosol))
Chromium	oral	LD50 Rat: >3400 mg/kg
	inhalation	LC50 Rat: >5.41 mg/L (4 h Aerosol)
Cobalt	oral	LD50 Rat: 550 mg/kg
	inhalation	LC50 Rat: <0.05 mg/L (4 hours)
	dermal	LD50 Rabbit: >2000 mg/kg
Manganese	oral	LD50 Rat: 9000 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:

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Causes serious eye irritation.

Product data:

No data available.

Substance data:

Name	Result
Chromium	Causes serious eye irritation.
Cobalt	Causes serious eye irritation

Respiratory or skin sensitization

Assessment:

May cause an allergic skin reaction.

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

Product data:

No data available.

Substance data:

Name	Result
Chromium	May cause an allergic skin reaction.
	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Nickel	May cause an allergic skin reaction.
Cobalt	May cause allergy or asthma symptoms or breathing difficulties if inhaled
	May cause an allergic skin reaction

Carcinogenicity

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

Product data: No data available.

Substance data:

Name	Species	Result
Nickel		Suspected of causing cancer.
Cobalt		Chronic inhalation exposure to cobalt metal has caused lung cancer in rats and mice, as well as systemic tumors in rats.

International Agency for Research on Cancer (IARC):

Name	Classification
Diiron trioxide	Group 3
Chromium	Group 3
Nickel	Group 2B
Manganese	Not Applicable
Cobalt	Group 2B

National Toxicology Program (NTP):

Name	Classification
Diiron trioxide	Not Applicable
Chromium	Known to be human carcinogens
Nickel	Reasonably anticipated to be human carcinogens
Manganese	Not Applicable
Cobalt	Reasonably anticipated to be human carcinogens

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Germ cell mutagenicity

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

Product data:

No data available.

Substance data:

Name	Result
Cobalt	Suspected of causing genetic defects.

Reproductive toxicity

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

Product data:

No data available.

Substance data:

Name	Result
Cobalt	May damage fertility.

Specific target organ toxicity (single exposure)

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

Product data:

No data available.

Substance data: No data available.

Specific target organ toxicity (repeated exposure)

Assessment:

Causes damage to organs through prolonged or repeated exposure.

Product data:

No data available.

Substance data:

Name	Result
Nickel	Causes damage to organs through prolonged or repeated exposure.
Cobalt	Repeated overexposure to cobalt compounds can produce reduced pulmonary function, diffuse nodular fibrosis of lungs and respiratory hypersensitivity.

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:

Inhalation, Ingestion, Skin contact, Eye contact.

Symptoms related to the physical, chemical and toxicological characteristics:

Refer to Section 4 of this SDS.

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

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

Product data: No data available.

Substance data: No data available.

Persistence and degradability

Product data: No data available.

Substance data:

Name	Result
Chromium	The rules for biodegradability of organic substances do not generally apply to Chromium, as it is a natural trace element and essential metal to many life forms.

Bioaccumulative potential

Product data: No data available.

Substance data:

Name	Result
Chromium	The rules for bioaccumulation of organic substances do not generally apply to Chromium, as it is a natural trace element and essential metal to many life forms.

Mobility in soil

Product data: No data available.

Substance data:

Name	Result
Chromium	Metallic Chromium is insoluble in soil, and given the abundance presence of it in the environment, its ecotoxicity potential is very low.

Results of PBT and vPvB assessment

Product data:

PBT assessment: This product does not contain any substances that are assessed to be a PBT.

vPvB assessment: This product does not contain any substances that are assessed to be a vPvB.

Substance data:

PBT assessment:

Chromium	The substance is not PBT.
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vPvB assessment:

Chromium	The Substance is not vPvB.
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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

Contaminated packages:

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Not determined or not applicable.

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

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Bulk Name	None
Ship type	None
Pollution category	None

SECTION 15: Regulatory information

Canada regulations

Domestic substances list (DSL): All ingredients are listed or exempt.

Non-domestic substances list (NDSL): None of the ingredients are listed.

SECTION 16: Other information

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Abbreviations and Acronyms: None

Disclaimer:

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Revision Notes:

Revision Date	Notes
2020-08-03	Version 2

End of Safety Data Sheet