

SAFETY DATA SHEET

Product: Lithium Manganese Dioxide Button Cell

Model/type reference: CR2032

Nominal Voltage: 3.0V

Rated Capacity: 210mAh

Applicant: DONGGUAN LARGE ELECTRONICS CO., LTD.

Address: No. 8 Jingyi Road, Dongcheng District, Dongguan City,
Guangdong Province.

Report No: P22122803701

Effective date: 2023-01-01

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Jesse Zhang

Section 1- Identification of the Substance/Preparation and of the Company/Undertaking

Product Identifier

Product Name: Lithium Manganese Dioxide Button Cell

Model No.: CR2032

Other means of identification

Synonyms: None

Recommended use of the chemical and restrictions on use

Recommended Use: LITHIUM PRIMARY/METAL BATTERIES

Uses advised against: No information available

Details of the supplier of the safety data sheet

Manufacturer's/ Supplier Name: DONGGUAN LARGE ELECTRONICS CO., LTD.

Address: No. 8 Jingyi Road, Dongcheng District, Dongguan City, Guangdong Province.

Telephone number of the manufacturer/supplier: +86-769-28055192

Emergency Telephone Number (24h): +86-769-28055192

E-mail address: sunfeilin@juda.cn

Version number: V2.0

Section 2 – Hazards Identification

Classification

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200) this product is an article which is a sealed battery and as such does not require an MSDS per the OSHA hazard communication standard unless ruptured. The hazards indicated are for a ruptured battery.

Carcinogenicity	Category 1A
Serious eye damage/eye irritation	Category 2
Skin corrosion/irritation	Category 2
Skin sensitization	Category 1
Specific target organ toxicity (single exposure)	Category 3
Specific target organ toxicity (repeated exposure)	Category 1
Acute toxicity(Oral)	Category 3
Acute Inhalation(Gases)	Category 2
Acute Inhalation(Dusts/Mists)	Category 2
Acute toxicity-Inhalation(Vapors)	Category 2
Reproductive Toxicity	Category 1A

GHS Label elements, including precautionary statements

Emergency Overview

Signal word: Danger

Hazard Statements

Toxic if swallowed

Fatal if inhaled

Causes skin irritation

Causes serious eye damage

May cause an allergic skin reaction

May cause cancer

May damage fertility or the unborn child

May cause respiratory irritation. May cause drowsiness or dizziness



This product is an article which contains a chemical substance. Safety information is given for exposure to the article as sold.

Intended use of the product should not result in exposure to the chemical substance This is a battery. In case of rupture: the above hazards exist.

Appearance Silvery

Physical State Solid

Odor Odorless

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 Contaminated work clothing should not be allowed out of the workplace Wear protective gloves Do not breathe dust/fume/gas/mist/vapors/spray Do not eat, drink or smoke when using this product Use only outdoors or in a well-ventilated area Wear eye/face protection
Precautionary Statements - Response	IF exposed or concerned: Get medical advice/attention Specific treatment (see supplemental first aid instructions on this label) IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing If eye irritation persists: Get medical advice/attention IF ON SKIN: Wash with plenty of soap and water Take off contaminated clothing and wash before reuse If skin irritation or rash occurs: Get medical advice/attention
Precautionary Statements - Storage	Store locked up
Precautionary Statements - Disposal	Dispose of contents/container to an approved waste disposal plant
Hazards not otherwise classified (HNOC)	Not applicable

Unknown Toxicity	-
Other information	May be harmful if swallowed Very toxic to aquatic life with long lasting effects Repeated or prolonged skin contact may cause allergic reactions with susceptible persons
Interactions with Other Chemicals	Use of alcoholic beverages may enhance toxic effects.

Section 3 – Composition/Information on Ingredients

Chemical Name	CAS Number	Weight-%	Trade Secret
Lithium	7439-93-2	1.8-2.5	-
Manganese dioxide	1313-13-9	32-36	-
Graphite	7782-42-5	2.5-3.5	-
Aluminum	7429-90-5	5-7	-
Lithium perchlorate	7791-03-9	1.5-2	-
1,2-Dimethoxyethane	110-71-4	9.5-10.5	-
Propylene carbonate	108-32-7	11-12	-
Iron	7439-89-6	19-21	-
Chromium	7440-47-3	4.5-5.5	-
Nickel	7440-02-0	2-2.5	
Polypropylene	9003-07-0	4-5	

* The exact percentage (concentration) of composition has been withheld as a trade secret.

Section 4 – First-aid Measures

General Advice	<p>First aid is upon rupture of sealed battery.</p> <p>Eye contact: If symptoms persist, call a physician. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Do not rub affected area.</p> <p>Skin contact: Wash off immediately with soap and plenty of water for at least 15 minutes. In the case of skin irritation or allergic reactions see a physician. May cause an allergic skin reaction.</p> <p>Inhalation: Remove to fresh air. If symptoms persist, call a physician. Get medical attention immediately if symptoms occur.</p> <p>Ingestion: Do NOT induce vomiting. Rinse mouth immediately and drink plenty</p>
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	<p>of water. Never give anything by mouth to an unconscious person. Call a physician.</p> <p>Self-protection of the first aider: Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Wear personal protective clothing (see section 8).</p>
Most important symptoms and effects, both acute and delayed	Most important symptoms and effects: Itching. Coughing and/ or wheezing. Itching
Indication of any immediate medical attention and special treatment needed	Notes to Physician: Treat symptomatically. May cause sensitization of susceptible persons.

Section 5 – Fire-fighting Measures

Suitable extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing Media	CAUTION: Use of water spray when fighting fire may be inefficient.
Specific Hazards arising from the chemical	Product is or contains a sensitizer. May cause sensitization by skin contact.
Hazardous Combustion Products	Carbon oxides.
Explosion Data	Sensitivity to Mechanical Impact: No. Sensitivity to Static Discharge: No.
Protective Equipment and precautions for firefighters	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Section 6 – Accidental Release Measures

Personal Precautions, protective equipment, and emergency procedures	<p>Personal Precautions: Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.</p> <p>Other Information: Refer to protective measures listed in Sections 7 and 8.</p>
Environmental Precautions	Refer to protective measures listed in Sections 7 and 8.
Methods and material for containment and	Methods for Containment: Prevent further leakage or spillage if safe to do so.

cleaning up	Methods for cleaning up: Pick up and transfer to properly labeled containers.
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Section 7 – Handling and Storage

Precautions for safe handling	Handling: In case of rupture. Use personal protection equipment. Avoid contact with skin, eyes or clothing.
Conditions for safe storage, including any incompatibilities	Storage: Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Incompatible Products: Strong acids. Strong oxidizing agents. Strong bases.

Section 8 – Exposure Controls and Personal Protection

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Manganese dioxide 1313-13-9	TWA: 0.02 mg/m ³ Mn TWA: 0.1 mg/m ³ Mn	(vacated) Ceiling: 5 mg/m ³ Ceiling: 5 mg/m ³ Mn	IDLH: 500 mg/m ³ Mn TWA: 1 mg/m ³ Mn STEL: 3 mg/m ³ Mn
Graphite 7782-42-5	TWA: 2 mg/m ³ respirable fraction all forms except graphite fibers	TWA: 15 mg/m ³ total dust synthetic TWA: 5 mg/m ³ respirable fraction synthetic (vacated) TWA: 2.5 mg/m ³ respirable dust natural (vacated) TWA: 10 mg/m ³ total dust synthetic (vacated) TWA: 5 mg/m ³ respirable fraction synthetic TWA: 15 mppcf natural	IDLH: 1250 mg/m ³ TWA: 2.5 mg/m ³ respirable dust
Chromium 7440-47-3	TWA: 0.5 mg/m ³	TWA: 1 mg/m ³ (vacated) TWA: 1 mg/m ³	IDLH: 250 mg/m ³ TWA: 0.5 mg/m ³
Nickel 7440-02-0	TWA: 1.5 mg/m ³	TWA: 1 mg/m ³ (vacated) TWA: 1 mg/m ³	IDLH: 10 mg/m ³ TWA: 0.015 mg/m ³

*ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value
 PEL: Occupational Safety and Health Administration - Permissible Exposure Limits
 NIOSH IDLH Immediately Dangerous to Life or Health

Other Exposure Guidelines

Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 968 F.2d 962
 (11th Cir., 1992) See section 15 for national exposure control parameters

Appropriate engineering controls	Engineering Measures: Showers Eyewash stations
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	Ventilation systems.
Individual protection measures, such as personal protective equipment	<p>Eye/Face Protection: If splashes are likely to occur:. Wear safety glasses with side shields (or goggles). None required for consumer use.</p> <p>Skin and Body Protection: Wear protective gloves and protective clothing. Long sleeved clothing. Impervious gloves.</p> <p>Respiratory Protection: No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.</p> <p>Hygiene Measures: Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection.Wash hands before breaks and immediately after handling the product.</p>

Section 9 - Physical and Chemical Properties

Physical Properties	Physical state: Solid		
	Appearance: Silvery and Button		
	Color: Silvery		
	Odor: Odorless		
	Odor Threshold: No information available		
Chemical Properties:			
Property		Values	Remarks/ Method
pH		No data available	None known
Melting / freezing point		No data available	None known
Boiling point / boiling range		No data available	None known
Flash Point		No data available	None known
Evaporation Rate		No data available	None known
Flammability (solid, gas)		No data available	None known
Flammability Limit in Air Upper flammability limit Lower flammability limit		No data available No data available	-
Vapor pressure		No data available	None known
Vapor density		No data available	None known
Specific Gravity		No data available	None known
Water Solubility		Insoluble in water	None known

Solubility in other solvents	No data available	None known
Partition coefficient: n-octanol/water	0.00001	None known
Autoignition temperature	130°C	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	0.00001	None known
Explosive properties	No data available	-
Oxidizing Properties	No data available	-

Other Information

Softening Point	No data available
VOC Content (%)	No data available
Particle Size	No data available
Particle Size Distribution	No data available

Section 10 - Stability and Reactivity

Reactivity	No data available.
Chemical stability	Stable under recommended storage conditions.
Possibility of Hazardous Reactions	None under normal processing.
Hazardous Polymerization	Hazardous polymerization does not occur.
Conditions to avoid	None known based on information supplied.
Incompatible materials	Strong acids. Strong oxidizing agents. Strong bases.
Hazardous Decomposition Products	Carbon oxides.

Section 11 - Toxicological Information

Information on likely routes of exposure

Product Information	Product does not present an acute toxicity hazard based on known or supplied information. In case of rupture:.
Inhalation	Specific test data for the substance or mixture is not available. Corrosive by inhalation.(based on components).
Eye Contact	Specific test data for the substance or mixture is not available. Expected to be an irritant based on components. Irritating to eyes. May cause redness, itching, and pain. May cause temporary eye irritation.
Skin Contact	Specific test data for the substance or mixture is not available. Expected to be an irritant based on components. Irritating to eyes. May cause redness, itching, and pain. May cause temporary eye irritation.
Ingestion	Specific test data for the substance or mixture is not available. Ingestion may

	cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May be harmful if swallowed.(based on components).
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Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Iron 7439-89-6	= 984 mg/kg (Rat)	–	–
Manganese dioxide 1313-13-9	= 9000 mg/kg (Rat)	–	–
Propylene carbonate 108-32-7	= 29000 mg/kg (Rat)	> 20 mL/kg (Rabbit)	–
Graphite 7782-42-5	> 10000 mg/kg (Rat)	–	–
Nickel 7440-02-0	> 9000 mg/kg (Rat)	–	–

Information on toxicological effects	Symptoms: Erythema (skin redness). May cause redness and tearing of the eyes. Itching. Rashes. Hives.
Delayed and immediate effects as well as chronic effects from short and long-term exposure	Sensitization: May cause sensitization of susceptible persons. May cause sensitization by inhalation. Mutagenic Effects: No information available. Carcinogenicity: The table below indicates whether each agency has listed any ingredient as a carcinogen

Chemical Name	ACGIH	IARC	NTP	OSHA
Chromium 7440-47-3	–	Group 3	–	–
Nickel 7440-02-0	–	Group 2B Group 1	Reasonably Anticipated	X

ACGIH (American Conference of Governmental Industrial Hygienists) A1 - Known Human Carcinogen A3 - Animal Carcinogen IARC (International Agency for Research on Cancer) Group 1 - Carcinogenic to Humans Group 2B - Possibly Carcinogenic to Humans Group 3 - Not Classifiable as to Carcinogenicity in Humans NTP (National Toxicology Program) Known - Known Carcinogen OSHA (Occupational Safety and Health Administration of the US Department of Labor) X - Present				
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Reproductive Toxicity	Contains a known or suspected reproductive toxin.
STOT - single exposure	No information available.

STOT - repeated exposure	Causes damage to organs through prolonged or repeated exposure. Based on classification criteria from the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200), this product has been determined to cause systemic target organ toxicity from chronic or repeated exposure. (STOT RE).
Chronic Toxicity	No known effect based on information supplied. Contains a known or suspected carcinogen. Contains a known or suspected reproductive toxin. Possible risk of irreversible effects. Avoid repeated exposure. Prolonged exposure may cause chronic effects. May cause adverse effects on the bone marrow and blood-forming system. Repeated or prolonged skin contact may cause skin irritation and/or dermatitis and sensitization of susceptible persons.
Target Organ Effects	Respiratory system. Eyes. Skin. Gastrointestinal tract (GI). Reproductive System. Blood. Central Nervous System (CNS). Central Vascular System (CVS). Kidney. Lungs. Nasal cavities. Cardiovascular system. Systemic Toxicity. Liver.
Aspiration Hazard	No information available.

Numerical measures of toxicity Product Information

The values which are on the right are calculated based on chapter 3.1 of the GHS document.	ATEmix (oral) ATEmix (dermal) ATEmix (inhalation-dust/mist)
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Section 12 - Ecological Information

Ecotoxicity

Very toxic to aquatic life with long lasting effects.

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Iron 7439-89-6	–	96h LC50: 13.6 mg/L (Morone saxatilis)	–	–
Propylene carbonate 108-32-7	72h EC50: > 500mg/L (Desmodesmus subspicatus)	96h LC50: > 1000 mg/L (Cyprinus carpio) 96h LC50: 5300 mg/L (Leuciscus idus)	EC50 > 10000 mg/L 17 h	48h EC50: > 500 mg/L
Nickel 7440-02-0	72h EC50: 0.18 mg/L (Pseudokirchneriella subcapitata) 96h EC50: 0.174 - 0.311 mg/L	(Brachydanio rerio) 96h LC50: 1.3mg/L (Cyprinus carpio) 96h LC50:	–	48h EC50: > 100 mg/L 48h EC50: 1mg/L

	(Pseudokirchneriella subcapitata)	10.4mg/L (Cyprinus carpio)		
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Persistence and Degradability	No information available.
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Bioaccumulation

Chemical Name	California Proposition 65
Manganese dioxide 1313-13-9	<0
Propylene carbonate 108-32-7	0.48
Other adverse effects	No information available.

Section 13 – Disposal Considerations

Waste treatment methods

Disposal methods: Should not be released into the environment.

Contaminated Packaging: Dispose of in accordance with federal, state and local regulations.

US EPA Waste Number D007

Chemical Name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Chromium 7440-47-3	–	Included in waste streams: F032, F034, F035, F037, F038, F039	5.0 mg/L regulatory Level	–
Nickel 7440-02-0	(hazardous constituent – no waste number)	Included in waste streams: F006, F039	–	–

California Hazardous Waste Codes 181

Chromium 7440-47-3	Toxic Corrosive Ignitable
Nickel 7440-02-0	Toxic powder Ignitable powder
Lithium 7439-93-2	Corrosive Ignitable Reactive
Manganese 7439-96-5	Ignitable powder

Section 14 – Transport Information

The Lithium Manganese Dioxide Button Cell (CR2032) as stated in Appendix is made in compliance to the requirements stated in the latest edition of the IATA Dangerous Goods Regulations Packing Instruction 968 section I B or 969 section II or 970 section II.

With regard to transport, the following regulations are cited and considered:

- The International Civil Aviation Organization (ICAO) Technical Instructions, Packing instruction 968 section I B or 969 section II or 970 section II (2023-2024 Edition).
- The International Air transport Association (IATA) Dangerous Goods Regulations, Packing instruction 968 section I B or 969 section II or 970 section II (64th Edition, 2023).
- Special provision 188 of the International Maritime Dangerous Goods (IMDG) Code (Amendment 40-20 Edition).
- The US Hazardous Materials Regulation 49 CFR (Code of Federal Regulations), sections 173-185 Lithium batteries and cells.
- The UN Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria 38.3 Lithium batteries.

These products are properly classified, described, packaged, marked, and labeled, and are in proper condition for transportation according to all the applicable international and national governmental regulations, not limited to the above mentioned. We further certify that the enclosed products have been tested and fulfilled the requirements and conditions in accordance with UN Recommendations (T1 – T8) on the Transport of Dangerous Goods Model Regulations and the Manual of Tests and Criteria.

Test results of the UN Recommendation on the Transport of Dangerous Goods

Manual of Test and Criteria (38.3 Lithium battery)			
No.	Test items	Test results	Remark
T1	Altitude simulation	Pass	-
T2	Thermal test	Pass	-
T3	Vibration	Pass	-
T4	Shock	Pass	-
T5	External short circuit	Pass	-
T6	Impact / Crush	Pass	-
T7	Overcharge	Pass	Not applicable
T8	Forced discharge	Pass	-

Additional Requirements for air transport:

1. Cells and batteries must be protected so as to prevent short circuits. This includes protection against contact with conductive materials within the same packaging that could lead to a short circuit.
2. Cells and batteries must be manufactured under a quality management program.
3. The Lithium content must be marked on the outside of the battery case except those manufactured before 1 January 2009.
4. Cells and batteries must be packed in strong outer packagings. (Applicable to PI 968 only)
5. Cells and batteries must be packed in inner packagings that completely enclose the cell or battery. To

provide protection from damage or compression to the batteries, the inner packagings must be placed in a strong rigid outer packaging of one of the packaging types shown below.

6. Each consignment must be accompanied with a document with an indication that:
 - the package contains lithium metal cells or batteries;
 - the package contains a flammability hazard exists;
 - Place for UN number(s), i.e. UN 3090, UN 3091,
 - a telephone number for additional information..
7. Each package must be labelled with a lithium battery handling label in addition to the Class 9 hazard label and Cargo Aircraft Only label.

Each package must be marked in accordance with the requirements of 7.1.4.1(a) and (b) and in addition the net weight when required by 7.1.4.1(c) must be marked on the package.

(applicable to PI 968 only)
8. Each package must be capable of withstanding a 1.2 m drop test in any orientation without (Applicable to PI 968 and 969 only):
 - damage to cells or batteries contained therein;
 - shifting of the contents so as to allow battery to battery (or cell to cell) contact;
 - release of contents.
9. Each package must be labelled with a lithium battery handling label (Figure 7.4.H). (Applicable to PI 969 and 970 only)
10. A Shipper's Declaration for Dangerous Goods is not required. (Applicable to PI 969 and 970 only)
11. Any person preparing or offering cells or batteries for transport must receive adequate instruction on these requirements commensurate with their responsibilities.
12. The equipment must be secured against movement within the outer packaging and must be equipped with an effective means of preventing accidental activation. (Applicable to PI 969 only)
13. The maximum number of batteries in each package must be the minimum number required to power the equipment plus two spares. (Applicable to PI 969 only)
14. The words "lithium metal batteries in compliance with Section II of PI 969" must be included on the air waybill, when an air waybill is used. The information should be shown in the "Nature and Quantity of Goods" box of the air waybill. (Applicable to PI 969 only)
15. Maximum net quantity of lithium ion cells must not be more than 5 kg. (Applicable to PI 969 and 970 only)
16. Equipment must be equipped with an effective means of preventing accidental activation. (Applicable to PI 970 only)
17. The equipment containing the cells or batteries must be secured against movement within the outer packaging and be packed so as to prevent accidental operation during air transport. (Applicable to PI 970 only)
18. The equipment must be packed in strong outer packagings constructed of suitable material of adequate strength and design in relation to the packaging's capacity and its intended use unless the cell or battery is afforded equivalent protection by the equipment in which it is contained. (Applicable to PI 970 only)
19. Where a consignment includes packages bearing the lithium battery handling label, the words "lithium metal batteries in compliance with Section II of PI 970" must be included on the air waybill, when an air waybill is used. The information should be shown in the "Nature and Quantity of Goods" box of the air waybill. (Applicable to PI 970 only)

Section 15 - Regulatory Information

International Inventories

TSCA: Complies

DSL: All components are listed either on the DSL or NDSL.

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

US 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 %
Manganese dioxide	1313-13-9	32-36	1.0
Chromium	7440-47-3	4.5-5.5	1.0
Ethylene glycol dimethyl ether	110-71-4	9.5-10.5	1.0
Nickel	7440-02-0	2-2.5	0.1

SARA 311/312 Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (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
Chromium 7440-47-3	-	X	X	-
Nickel 7440-02-0	-	X	X	-

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
Chromium 7440-47-3	5000 lb	-	RQ 5000 lb final RQ RQ 2270 kg final RQ

Nickel 7440-02-0	100 lb	-	RQ 100 lb final RQ RQ 45.4 kg final RQ
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US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

Chemical Name	California Proposition 65
Nickel - 7440-02-0	Carcinogen

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	Illinois
Manganese dioxide (MnO ₂) 1313-13-9	-	-	X	X	X
Graphite 7782-42-5	X	X	X	-	-
Litium 7439-93-2	X	X	X	-	-
Polytetrafluoroethylene (PTFE) 9002-84-0	-	-	X	-	-

International Regulations

Mexico

National occupational exposure limits

Component	Carcinogen Status	Exposure Limits
Manganese dioxide (MnO ₂) 1313-13-9 (27.9%)	-	Mexico: TWA= 2 mg/m ³
Graphite 7782-42-5 (2.7%)	-	Mexico: TWA= 2 mg/m ³
Stainless steel, powder, -150 mesh 12597-68-1 (52.0%)	A3 A2	Mexico: TWA 0.15 mg/m ³ Mexico: TWA 0.002 mg/m ³ Mexico: TWA 0.2 mg/m ³ Mexico: TWA 5 mg/m ³

Mexico - Occupational Exposure Limits – Carcinogens

A2 - Suspected Human Carcinogen

A3 - Confirmed Animal Carcinogen

Canada

WHMIS Hazard Class

D2A - Very toxic materials

Section 16 - Other Information

NFPA	Health Hazards 1	Flammability 0	Instability 1	Physical and Chemical Hazards - Personal Protection X
HMIS	Health Hazards 4	Flammability 0	Physical Hazard 1	

Chronic Hazard Star Legend *=Chronic Health Hazard

Revision Note: No information available

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release 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 or in any process, unless specified in the text.

--End of Safety Data Sheet--