



## SAFETY DATA SHEET



### Section 1: PRODUCT AND COMPANY IDENTIFICATION

Interstate All-Battery  
4301 121<sup>st</sup> Street  
Urbandale, IA 50323

EMERGENCY PHONE: 24 hours – (800) 255-3924  
INFORMATION PHONE: (800) 541-8419, Ext. 6672 or 6663

**PRODUCT NAME:** Nickel Metal Hydride (NiMH) Rechargeable Batteries

**SDS NUMBER:** NIMH1

**REVISION NUMBER:** 1

**DATE OF PREPARATION/REVISION:** June 1, 2015

### Section 2: HAZARDS IDENTIFICATION

**NOTE:** Under normal conditions of battery use, internal components will not present a health hazard. The following information is provided for battery electrolyte (acid) for exposure that may occur during container breakage or under extreme heat conditions such as fire.

#### EMERGENCY OVERVIEW:

The battery should not be opened or burned. Exposure to the ingredients contained within or their combustion products could be harmful. If the battery is opened or broken then the following hazards apply:



#### ROUTES OF ENTRY:

**EYE CONTACT:** Contact with the battery electrolyte can cause severe irritation, burns, and cornea damage upon contact.

**SKIN CONTACT:** Battery electrolyte (acid) can cause severe irritation, burns and ulceration.

**SKIN ABSORPTION:** Not a significant route of entry

**INHALATION:** Acid mist generated during battery charging or spillage of the electrolyte in a confined area may cause respiratory irritation.

**INGESTION:** The electrolyte ingestion irritates the mouth and the throat seriously resulting in serious burns to the mouth and gastrointestinal tract.

#### ACUTE HEALTH EFFECTS:

Exposure and/or contact with battery electrolyte (acid) may lead to acute irritation of the skin, corneal damage of the eyes, and irritation of the mucous membranes of the eyes and upper respiratory system, including lung.

**CHRONIC HEALTH EFFECTS:**

Chronic overexposure to nickel may result in cancer; dermal contact may result in dermatitis in sensitive individuals.

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:**

A knowledge of the available toxicology information and of the physical and chemical properties of the material suggests that overexposure is unlikely to aggravate existing medical conditions.

**Section 3: COMPOSITION/INFORMATION ON INGREDIENTS**

Material	% by Wt.	CAS Number	Eight Hour Exposure Limits	
			OSHA PEL	NIOSH REL
<b>Hydrogen Absorbing Alloy:</b>				
Alloy constituent: <b>Nickel</b>	20-40%	7440-02-0	1.0 µg/m <sup>3</sup>	0.015 µg/m <sup>3</sup>
Alloy constituent: <b>Cobalt</b>		7440-48-4	0.1 µg/m <sup>3</sup>	0.005 µg/m <sup>3</sup>
Alloy constituent: <b>Manganese</b>		7439-96-5	5.0 µg/m <sup>3</sup>	1.000 µg/m <sup>3</sup>
Alloy constituent: <b>Aluminum</b>		7429-90-5	15 µg/m <sup>3</sup>	5.000 µg/m <sup>3</sup>
<b>Oxide:</b>				
Oxide constituent: <b>Nickel</b>	15-25%	7440-02-0	1.0 µg/m <sup>3</sup>	0.015 µg/m <sup>3</sup>
Oxide constituent: <b>Cobalt</b>		7440-48-4	0.1 µg/m <sup>3</sup>	0.005 µg/m <sup>3</sup>
Oxide constituent: <b>Zinc</b>		7440-66-6		
<b>Nickel</b>	5-15%	7440-02-0	1.0 µg/m <sup>3</sup>	0.015 µg/m <sup>3</sup>
<b>Iron</b>	20-40%	7439-89-6		
<b>Carbon Black</b>	0-1%	1333-86-4	3.5 µg/m <sup>3</sup>	
<b>Potassium Hydroxide (35%)</b>	0-15%	1310-58-3	none	2.000 µg/m <sup>3</sup>
<b>Sodium Hydroxide</b>		1310-73-2	2 µg/m <sup>3</sup>	2 µg/m <sup>3</sup>
<b>Lithium Hydroxide</b>		1310-65-2		

**Section 4: FIRST AID MEASURES**

**EYE CONTACT:** Immediately rinse with cool running water for at least 15 minutes. Seek medical attention immediately after rinsing.

**SKIN CONTACT:** Wash thoroughly with soap and water. If acid is splashed on clothing or shoes, remove immediately and discard. Acid cannot be removed from leather.

**INHALATION:** Remove from exposure to fresh air and consult a physician if any of the acute effects listed above develop.

**INGESTION:** Lead: Consult a physician. Battery Electrolyte: Do not induce vomiting. Refer to a physician immediately.

**Section 5: FIRE FIGHTING MEASURES**

**EXTINGUISHING MEDIA:** Dry chemical, foam, or CO<sub>2</sub>

**SPECIAL FIRE FIGHTING PROCEDURES:** Use positive pressure, self-contained breathing apparatus and full protective clothing.

**SPECIFIC HAZARDS:** Batteries may burst and release hazardous decomposition products when exposed to a fire situation.

**Section 6: ACCIDENTAL RELEASE MEASURES**

Remove combustible materials and all sources of ignition. Contain spill by diking with soda ash (sodium carbonate) or quicklime (calcium oxide). Cover spill with either chemical. Mix well. Make certain the mixture is neutral, and then collect residue and place in a drum or other suitable container. Dispose of as a hazardous waste.

Wear acid-resistant boots, chemical face shield, chemical splash goggles, and acid-resistant gloves.

**DO NOT RELEASE UNNEUTRALIZED ACID!**

**Section 7: HANDLING AND STORAGE**

**WORK PRACTICES:** Accidental short circuit will bring high temperature elevation to the battery as well as shorten the battery life. Be sure to avoid prolonged short circuit since the heat can burn attendant skin and even rupture of the battery cell case. Batteries packaged in bulk containers should not be shaken. Metal covered tables or belts used for assembly of batteries into devices can be the source of short circuits; apply insulating material to assembly work surface.

**SPECIAL PRECAUTIONS:** Do not damage or remove the external tube. Batteries may rupture or vent if disassembled, crushed, or exposed to high temperatures.

**STORAGE:** Store NiMH batteries in a dry place at normal room temperature. Avoid direct sunlight, high temperature and high humidity. Avoid contact with conductive materials, water, seawater, strong oxidizers and strong acids.

**Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

**VENTILATION:** Not required under normal handling conditions. Battery should not be opened. Should a cell become disassembled, the electrode should be stored in a fireproof cabinet, away from combustibles.

**RESPIRATORY PROTECTION:** None required under normal handling conditions. If respiratory irritation occurs, wear a respirator suitable for protection against acid mist.

**GLOVES:** None required under normal handling conditions. Use neoprene or natural rubber gloves if handling an open or leaking battery.

**EYE PROTECTION:** None required under normal handling conditions. Wear safety glasses with side shields if handling an open or leaking battery.

**OTHER PROTECTIVE EQUIPMENT:** None required under normal handling conditions.

<b>Section 9: PHYSICAL AND CHEMICAL PROPERTIES</b>
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<ul style="list-style-type: none"> <li>▪ <b>APPEARANCE (PHYSICAL STATE, &amp; COLOR) :</b></li> <li>▪ <b>ODOR:</b></li> <li>▪ <b>ODOR THRESHOLD:</b></li> <li>▪ <b>PH:</b></li> <li>▪ <b>MELTING POINT/FREEZING POINT:</b></li> <li>▪ <b>INITIAL BOILING POINT AND BOILING RANGE:</b></li> <li>▪ <b>FLASH POINT:</b></li> <li>▪ <b>EVAPORATION RATE:</b></li> <li>▪ <b>FLAMMABILITY (SOLID, GAS):</b></li> <li>▪ <b>UPPER/LOWER FLAMMABILITY OR EXPLOSIVE LIMITS:</b></li> <li>▪ <b>VAPOR PRESSURE:</b></li> <li>▪ <b>VAPOR DENSITY:</b></li> <li>▪ <b>RELATIVE DENSITY:</b></li> <li>▪ <b>SOLUBILITY(IES):</b></li> <li>▪ <b>PARTITION COEFFICIENT: N-OCTANOL/WATER:</b></li> <li>▪ <b>AUTO-IGNITION TEMPERATURE:</b></li> <li>▪ <b>DECOMPOSITION TEMPERATURE:</b></li> </ul>	<p>Solid &amp; metallic</p> <p>Odorless</p> <p>Not applicable</p> <p>Not applicable</p> <p>Not applicable</p> <p>Not applicable</p> <p>Not applicable</p> <p>Not applicable</p> <p>Not determined</p> <p>Not determined</p> <p>Not applicable</p> <p>Not applicable</p> <p>Not applicable</p> <p>Not applicable</p> <p>Not applicable</p> <p>Not applicable</p> <p>Not applicable</p> <p>Not applicable</p>
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<b>Section 10: STABILITY AND REACTIVITY</b>
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**STABILITY:**

Unstable  Stable

**CONDITIONS TO AVOID:**

Flames, sparks, and other sources of ignition

**INCOMPATIBILITY:** Conductive materials, water, seawater, strong oxidizers and strong acids

**HAZARDOUS DECOMPOSITION PRODUCTS:** Acid or harmful fumes are emitted during fire.

**HAZARDOUS POLYMERIZATION:** Will not occur.

**CONDITIONS TO AVOID:** Flames, sparks, and other sources of ignition, incompatible materials. Also avoid direct sunlight and high humidity

<b>Section 11: TOXICOLOGICAL INFORMATION</b>
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There is no data available on the product itself. The information of the internal cell materials is as follows.

**NICKEL, NICKEL COMPOUNDS**

- Acute toxicity:
 

Oral	GHS: out of Category
Skin	Unknown
Inhalation (gas)	GHS: exempt from a classification
Inhalation (steam)	Unknown
Inhalation (mist)	Unknown
- Skin corrosivity: Unknown
- Serious damage and irritant property for eyes: Unknown.
- Respiratory or skin sensitization:
 

Respiratory sensitization:	GHS: Category 1
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The allergy, asthma or breathing difficulties might be caused when inhaling.

Skin sensitization: GHS: Category 1  
The allergic skin reaction might be caused.

- Germline mutagenicity:  
GHS: It is not possible to classify it due to data deficiency.
- Carcinogenicity:  
GHS: Category 2  
ACGIH: (Metal) A5 – Not suspected as a human carcinogen  
ACGIH: (water-soluble compounds) A4 – Not classified as a human carcinogen obviously  
ACGIH: (Insoluble compounds) A1 – Confirmed human carcinogen  
NIOSH: Potential occupational carcinogen  
NTP: Reasonably anticipated to be human carcinogen  
IARC: (Metal) Group 2B possibly carcinogenic to human  
IARC: (Compounds) Group 1 carcinogenic to human
- Reproduction Toxicity:  
GHS: It is not possible to classify it due to data deficiency.
- Certain target organ/ Systemic toxicity (single exposure):  
GHS: Category 1(respiratory organ and kidney).  
The disorder of the respiratory organ and the kidney is caused.
- Certain target organ/ Systemic toxicity (repeated exposure):  
GHS: Category 1(respiratory organ).  
The disorder of the respiratory organ is caused by long-term or repeated exposure.

#### COBALT COMPOUNDS

- Acute toxicity:
  - Oral GHS: out of Category.
  - Skin Unknown
  - Inhalation (gas) GHS: exempt from a classification.
  - Inhalation (steam) Unknown
  - Inhalation (mist) GHS: It is not possible to classify it due to data deficiency.
- Skin corrosivity: Unknown.
- Serious damage and irritant property for eyes: Unknown.
- Respiratory or skin sensitization:
  - Respiratory sensitization: GHS: Category 1  
The allergy, asthma or breathing difficulties might be caused when inhaling.
  - Skin sensitization: GHS: Category 1  
The allergic skin reaction might be caused.
- Germline mutagenicity: Unknown.
- Carcinogenicity:  
GHS: Category 2  
ACGIH: A3 –Confirmed animal carcinogen but relevance to human carcinogen is unknown.  
IARC: Group 2B possibly carcinogenic to human.  
The cancer might be caused.
- Reproduction Toxicity:  
GHS: Category 2.  
The adverse effect on reproductive competence or the fetus might occur.
- Certain target organ/ Systemic toxicity (single exposure):  
GHS: Category 3(respiratory tract irritating properties).  
The respiratory organ might be stimulated.
- Certain target organ/ Systemic toxicity (repeated exposure):  
GHS: Category 1(respiratory organ).  
The disorder of the respiratory organ is caused by long-term or repeated exposure.

#### MANGANESE COMPOUNDS

- Acute toxicity:
  - Oral GHS: out of Category
  - Skin Unknown
  - Inhalation (gas) GHS: exempt from a classification.
  - Inhalation (steam, mist) Unknown
- Skin corrosivity: GHS: Category 3. Slight skin stimulation
- Serious damage and irritant property for eyes: GHS: Category 2B. Eye stimulation
- Respiratory or skin sensitization:
  - Respiratory sensitization: Unknown
  - Skin sensitization: Unknown
- Germline mutagenicity: GHS: It is not possible to classify.
- Carcinogenicity: GHS: out of Category.
- Reproduction Toxicity: GHS: Category 1B.  
The adverse effect on reproductive competence or the fetus might occur.
- Certain target organ/ Systemic toxicity (single exposure):
  - GHS: Category 1(respiratory organ).
  - The disorder of the respiratory organ is caused.
- Certain target organ/ Systemic toxicity (repeated exposure):
  - GHS: Category 1(respiratory organ, nerve).
  - The disorder of the respiratory organ and nerve system is caused by long-term or repeated inhalation exposure.

#### ALUMINUM COMPOUNDS

- Acute toxicity:
  - Oral, skin, inhalation (steam, dust) Unknown
- Skin corrosivity: Unknown
- Serious damage & irritant property for eyes: Unknown
- Respiratory or skin sensitization:
  - Respiratory sensitization: Unknown
  - Skin sensitization: Unknown
- Germline mutagenicity: Unknown
- Carcinogenicity: Unknown
- Reproduction Toxicity: Unknown
- Certain target organ/ Systemic toxicity (single exposure): Unknown.
- Certain target organ/ Systemic toxicity (repeated exposure):
  - GHS: Category 1 and 2
  - The disorder of the pulmonary is caused by long-term or repeated inhalation exposure.(Category 1) The disorder of the nerve system by long-term or repeated oral exposure might be caused. (Category 2)

#### ZINC OXIDE

- Acute toxicity:
  - Oral rat LD50 > 5000mg/kg
  - Inhalation (dust, mist) rat LC50 > 5.7mg/l the harmful might be caused when inhaling
- Skin corrosivity: GHS: out of Category
- Serious damage and irritant property for eyes: GHS: out of Category
- Respiratory or skin sensitization:
  - Respiratory sensitization: Unknown
  - Skin sensitization: GHS: out of Category
- Germline mutagenicity: Unknown.
- Carcinogenicity: GHS: out of Category
- Reproduction Toxicity: GHS: out of Category

- Certain target organ/ Systemic toxicity (single exposure):  
GHS: Category 1.  
The disorder of the whole body
- Certain target organ/ Systemic toxicity (repeated exposure):  
GHS: Category 1.  
The disorder of the pulmonary is caused by long-term or repeated inhalation exposure.

**CARBON BLACK**

- Acute toxicity:
 

Oral	rat LD50 >15400 mg/kg
Skin	Unknown
Inhalation (dust)	Unknown
- Skin corrosivity: Unknown
- Serious damage and irritant property for eyes: Unknown
- Respiratory or skin sensitization:
 

Respiratory sensitization:	Unknown
Skin sensitization:	Unknown
- Germline mutagenicity: Unknown
- Carcinogenicity: GHS: Category 2  
ACGIH: A3 –Confirmed animal carcinogen but relevance to human carcinogen is unknown.  
IARC: Group 2B possibly carcinogenic to human.  
The cancer might be caused.
- Reproduction Toxicity: Unknown.
- Certain target organ/ Systemic toxicity (single exposure): Unknown.
- Certain target organ/ Systemic toxicity (repeated exposure):  
GHS: Category 1  
The disorder of the pulmonary is caused by long-term or repeated inhalation exposure.

**POTASSIUM HYDROXIDE**

- Acute toxicity:
 

Oral	GHS: Category 3. Harmful if swallowed
Skin	GHS: It is not possible to classify
Inhalation (steam)	GHS: It is not possible to classify
Inhalation (dust)	GHS: It is not possible to classify
- Skin corrosivity: GHS: Category 1B.  
Serious chemical wound of the skin and damage of eyes is caused.
- Serious damage and irritant property for eyes: GHS: Category 1
- Respiratory or skin sensitization:
 

Respiratory sensitization:	GHS: It is not possible to classify
Skin sensitization:	GHS: out of Category
- Germline mutagenicity: GHS: out of Category
- Carcinogenicity: GHS: It is not possible to classify
- Reproduction Toxicity: GHS: It is not possible to classify
- Certain target organ/ Systemic toxicity (single exposure):  
GHS: Category 1  
The disorder of the respiratory system is caused
- Certain target organ/ Systemic toxicity (repeated exposure)  
GHS: It is not possible to classify

**SODIUM HYDROXIDE**

- Acute toxicity:
 

Oral	GHS: It is not possible to classify
Skin	GHS: It is not possible to classify

- Inhalation (gas)           GHS: out of Category
- Inhalation (steam)       Unknown
- Inhalation (dust)        Unknown
- Skin corrosivity:        GHS: Category 1  
                                  Serious chemical wound of the skin and damage of eyes is caused.
- Serious damage and irritant property for eyes:        GHS: Category 1  
                                  Serious damage of eyes is caused
- Respiratory or skin sensitization:
  - Respiratory sensitization:                   GHS: It is not possible to classify
  - Skin sensitization:                           GHS: out of Category
- Germline mutagenicity:                                   GHS: out of Category
- Carcinogenicity:   GHS: It is not possible to classify.
- Reproduction Toxicity:                                 GHS: It is not possible to classify.
- Certain target organ/ Systemic toxicity (single exposure):
  - GHS: Category 1(respiratory system).
  - The disorder of the respiratory organ is caused.
- Certain target organ/ Systemic toxicity (repeated exposure):
  - GHS: It is not possible to classify

## LITHIUM HYDROXIDE

- Acute toxicity:
  - Oral                         GHS: Category 3. Harmful if swallowed
  - Skin                        Unknown
  - Inhalation (steam)       Unknown
  - Inhalation (dust)        GHS: Category 3. Harmful if inhaled
- Skin corrosivity:        GHS: Category 1  
                                  Serious chemical wound of the skin and damage of eyes is caused
- Serious damage and irritant property for eyes:        GHS: Category 1
- Respiratory or skin sensitization:
  - Respiratory sensitization:                   GHS: It is not possible to classify
  - Skin sensitization:                           GHS: It is not possible to classify
- Germline mutagenicity:                                   Unknown
- Carcinogenicity:   Unknown
- Reproduction Toxicity:                                 Unknown
- Certain target organ/ Systemic toxicity (single exposure):
  - GHS: Category 1.
  - The disorder of the respiratory system is caused by inhalation exposure.
- Certain target organ/ Systemic toxicity (repeated exposure):
  - GHS: Category 1&2.
  - The disorder of the respiratory system is caused by long-term or repeated inhalation exposure. The disorder of the liver and the hematopoietic system by long-term or repeated oral exposure might be caused.

<b>Section 12: ECOLOGICAL INFORMATION</b>
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**EFFECTS OF MATERIALS ON PLANTS OR ANIMALS:** Nickel and its compounds may cause an adverse effect to animals and plants that come into contact with them.

**EFFECTS ON AQUATIC LIFE:** Nickel and its compounds may cause an adverse effect to animals and plants in an aquatic environment that come into contact with them.



<b>Section 13: DISPOSAL</b>
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Intact, spent batteries are not considered to be hazardous waste.

Waste NiMH batteries meet the United States federal definition of a solid waste per 40 Code of Federal Regulations (CFR) 261.2. It is recommended that the batteries be recycled even though they can be disposed of in the garbage. To find an Interstate All Battery Store that will send NiMH batteries for recycling, please go to the dealer locator function found at [www.interstatebatteries.com](http://www.interstatebatteries.com). Recycling: Waste NiMH batteries do not fall under any specific RCRA, F, K, P or U lists. Other nations and some US states may regulate waste based on additional criteria or different test protocols. The status of scrap NiMH batteries should be confirmed in the nation or US state where disposal occurs.



<b>Section 14: TRANSPORTATION INFORMATION</b>
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<b>UN NUMBER:</b>	UN3496
<b>UN PROPER SHIPPING NAME:</b>	Batteries, Nickel-Metal Hydride
<b>TRANSPORT HAZARD CLASS:</b>	Class 9
<b>PACKING GROUP:</b>	Not Applicable

Nickel Metal Hydride batteries (sometimes referred to as “Dry cell” batteries) are not listed as dangerous goods under the International Civil Aviation Organization (ICAO), 2013-2014 edition, International Air Transport Association (IATA), 54th edition, U.S. Department of Transportation. (DOT), 49 CFR. These batteries are not subject to the dangerous goods regulations provided they meet the requirements contained in the following Special Provisions. Special Provision A123 in the IATA Dangerous Goods Regulations and ICAO Technical Instructions and Special Provision 130 in 49 CFR 172.102 of the U.S. hazardous materials regulations require these batteries to be packed in such a way to prevent short circuits or generating a dangerous quantity of heat. In addition, the IATA Dangerous Goods Regulations and ICAO Technical Instructions require the words “Not Restricted” and “Special Provision A123” to be provided on the air waybill, when an air waybill is issued. Effective January 1, 2012 the International Maritime Organization (IMO) regulates shipments by ocean, in excess of 100 Kg, as a Class 9 dangerous good under UN 3496 and Special Provision 117 and 963. Nickel Metal Hydride batteries are accepted for shipping by FedEx or UPS.

IATA Provision A199 was added to the 56th edition of the IATA *Dangerous Goods Regulations (January 1, 2015)*. The 56<sup>th</sup> edition incorporates all amendments made by the ICAO Dangerous Goods Panel in developing the content of the 2015–2016 edition of the ICAO *Technical Instructions* as well as changes adopted by the IATA Dangerous Goods Board.

**A199**—is a new special provision assigned against the entry for **Batteries, nickel-metal hydride**. The special provision identifies that UN 3496 only applies in sea transport and that provided that nickel-metal hydride batteries are prepared in accordance with the special provision they are “not restricted” in air transport.

**Provision 130 in 49 CFR 172.102 says:**

“Batteries, dry, sealed, n.o.s.,” commonly referred to as dry batteries, are hermetically sealed and generally utilize metals (other than lead) and/or carbon as electrodes. These batteries are typically used for portable power applications. The rechargeable (and some non-rechargeable) types have gelled alkaline electrolytes (rather than acidic) making it difficult for them to generate hydrogen or oxygen when overcharged and

therefore, differentiating them from non-spillable batteries. Dry batteries specifically covered by another entry in the § 172.101 Table must be transported in accordance with the requirements applicable to that entry. For example, nickel-metal hydride batteries transported by vessel in certain quantities are covered by another entry ( *see* Batteries, nickel-metal hydride, UN3496). Dry batteries not specifically covered by another entry in the § 172.101 Table are covered by this entry ( *i.e.*, Batteries, dry, sealed, n.o.s.) and are not subject to requirements of this subchapter except for the following:

(a) *Incident reporting.* For transportation by aircraft, a telephone report in accordance with § 171.15(a) is required if a fire, violent rupture, explosion or dangerous evolution of heat ( *i.e.*, an amount of heat sufficient to be dangerous to packaging or personal safety to include charring of packaging, melting of packaging, scorching of packaging, or other evidence) occurs as a direct result of a dry battery. For all modes of transportation, a written report submitted, retained, and updated in accordance with § 171.16 is required if a fire, violent rupture, explosion or dangerous evolution of heat occurs as a direct result of a dry battery or battery-powered device.

(b) *Preparation for transport.* Batteries and battery-powered device(s) containing batteries must be prepared and packaged for transport in a manner to prevent:

(1) A dangerous evolution of heat;

(2) Short circuits, including but not limited to the following methods:

- (i) Packaging each battery or each battery-powered device when practicable, in fully enclosed inner packaging made of non-conductive material;
- (ii) Separating or packaging batteries in a manner to prevent contact with other batteries, devices or conductive materials ( *e.g.*, metal) in the packaging; or
- (iii) Ensuring exposed terminals or connectors are protected with non-conductive caps, non-conductive tape, or by other appropriate means; and

(3) Damage to terminals. If not impact resistant, the outer packaging should not be used as the sole means of protecting the battery terminals from damage or short circuiting. Batteries must be securely cushioned and packed to prevent shifting which could loosen terminal caps or reorient the terminals to produce short circuits. Batteries contained in devices must be securely installed. Terminal protection methods include but are not limited to the following:

- (i) Securely attaching covers of sufficient strength to protect the terminals;
- (ii) Packaging the battery in a rigid plastic packaging; or
- (iii) Constructing the battery with terminals that are recessed or otherwise protected so that the terminals will not be subjected to damage if the package is dropped.

(c) *Additional air transport requirements.* For a battery whose voltage (electrical potential) exceeds 9 volts—

(1) When contained in a device, the device must be packaged in a manner that prevents unintentional activation or must have an independent means of preventing unintentional activation ( *e.g.*, packaging restricts access to activation switch, switch caps or locks, recessed switches, trigger locks, temperature sensitive circuit breakers, *etc.* ); and

(2) An indication of compliance with this special provision must be provided by marking each package with the words “not restricted” or by including the words “not restricted” on a transport document such as an air waybill accompanying the shipment.

(d) *Used or spent battery exception.* Used or spent dry batteries of both non-rechargeable and rechargeable designs, with a marked rating up to 9-volt that are combined in the same package and transported by highway or rail for recycling, reconditioning, or disposal are not subject to this special provision or any other requirement of the HMR. Note that batteries utilizing different chemistries ( *i.e.*, those battery

chemistries specifically covered by another entry in the § 172.101 Table) as well as dry batteries with a marked rating greater than 9-volt may not be combined with used or spent batteries in the same package. Note also that this exception does not apply to batteries that have been reconditioned for reuse.

**Special Provision A123 in the IATA Dangerous Goods Regulations says:**

This entry applies to Batteries, electric storage, not otherwise listed in Subsection 4.2 – List of Dangerous Goods. Examples of such batteries are: alkali-manganese, zinc-carbon, nickel-metal hydride and nickel-cadmium batteries. Any electrical battery or battery powered device, equipment or vehicle having the potential of dangerous evolution of heat must be prepared for transport so as to prevent:

- (a) A short-circuit (e.g. in the case of batteries, by the effective insulation of exposed terminals; or, in the case of equipment, by disconnection of the battery and protection of exposed terminals) is forbidden from transport; and
- (b) Accidental activation

The words “Not Restricted” and the Special Provision number must be included in the description of the substance on the Air Waybill as required by 8.2.6, when an Air Waybill is issued.

**TRANSPORT CANADA TRANSPORTATION OF DANGEROUS GOODS REGULATIONS:** NiMh batteries are not classified as dangerous goods and are exempt for the TDG Regulations

<b>Section 15: REGULATORY INFORMATION</b>
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**CALIFORNIA PROPOSITION 65 WARNING:** This product has been evaluated and does not require warning labeling under California Proposition 65.

**SARA TITLE III:** The contents of this product are toxic chemicals that are subject to the reporting requirements of section 302 and 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40CFR 355 and 372).

**CANADIAN ENVIRONMENTAL PROTECTION ACT:** These products are manufactured articles and are exempt from regulation.

<b>Section 16: OTHER INFORMATION</b>
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Disclaimer: This information has been compiled from sources considered to be dependable and is, to the best of our knowledge and belief, accurate and reliable as of the date compiled. However, no representation, warranty (either express or implied) or guarantee is made to the accuracy, reliability or completeness of the information contained herein. This information relates to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. It is the user's responsibility to satisfy himself as to the suitability and completeness of this information for his own particular use. We do not accept liability for any loss or damage that may occur, whether direct, indirect, incidental or consequential, from use of this information.