



SAFETY DATA SHEET

This Safety Data Sheet Complies with directives from the United States Occupational Safety and Health Administration (OSHA), Canadian Controlled Product Regulations (WHMIS), the European Union Commission Regulation (EC) 1907/2006 & (EC) 2015/830, the Australian National Occupational Health and Safety Commission (NOHSC), the Taiwan Bureau of Standards, the Japan Ministry of Economy, the Inspection and Quarantine of the People's Republic of China (GB/T 16483-2008), and the Brazil Standard (ABNT NRB 14725-3).

SECTION I - PRODUCT AND COMPANY IDENTIFICATION

1.1 Product Identification:

Secondary Smart Nickel Metal Hydride Battery Packs:

Model	Ratings
Ni1030xx	10.8V, <42Wh
NJ1020xx	12.0V, <46Wh

(Where "XX" is used to specific custom part number.)

1.2 Company Identification:

Company Name: Inspired Energy, LLC
Address: 25440 NW 8th Place; Newberry, FL 32669
Telephone Number: +1-352-472-4855
Fax Number: +1-352-472-4859
Emergency Contact Number: +1-703-527-3887

SECTION II - HAZARD IDENTIFICATION

2.1 Classification of Products:

Secondary battery packs are enclosed in UL-94, V-0 enclosures designed to withstand temperatures and pressures encountered during normal use. The hazardous component in battery packs is the Nickel Metal Hydride cell. Under normal use the battery cells present no physical danger of ignition or explosion and chemical danger of hazardous materials leakage.

Battery cells are designed to vent gas to prevent explosion, if exposed to a fire, added mechanical shocks, electrically abused or physically damaged. This leaked gas could contain material classified as hazardous.

2.2 Label and Markings:

2.2.1 Example of Battery Pack Markings:

WARNING: CHARGE ONLY WITH SPECIFIED CHARGERS ACCORDING TO DEVICE MANUFACTURER'S INSTRUCTIONS. DO NOT OPEN BATTERY, DISPOSE OF IN FIRE OR SHORT CIRCUIT-MAY IGNITE, EXPLODE, LEAK OR GET HOT CAUSING PERSONAL INJURY.

2.3 Effect(s) of Hazard Exposure:

Human Health Effects if Exposed to Cell Venting:

Skin Contact: The steam or liquid of the cell electrolyte can have adverse reactions to the skin. If cell electrolyte contacts skin it can cause severe irritation, chemical burns or dermatitis.

Eye Contact: The steam or liquid of the cell electrolyte can have adverse reactions to the eyes. If cell electrolyte contacts the eyes it can cause severe irritation or chemical burns.

Inhalation: The steam or liquid of the cell electrolyte can have adverse reactions if inhaled. If cell electrolyte is inhaled it may cause severe respiratory irritation, bronchitis or pneumonia.

Ingested: Swallowing or ingesting the contents of an open cell can cause serious chemical burns to the mouth, esophagus and gastrointestinal tract.

Medical Conditions Aggravated by Exposure: Not Available

Interactions with Other Chemicals: Immersion in high conductivity liquids may cause corrosion and breaching of the cell or battery enclosure. If vented cell electrolyte contacts water it will generate detrimental hydrogen fluoride.

Environmental Effects: Not Available

SECTION III - COMPOSITION / INFORMATION OF INGREDIENTS

3.1 Classification of Hazardous Ingredients by Geographic Markets:

USA: This battery pack is an article pursuant to 29 CFR 1910.1200. The information contained in this Safety Data Sheet contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

Canada: This is not a controlled produced under WHMIS. The products listed in this Safety Data Sheet are defined as "Manufactured Articles" and is not subject to the regulations of the Hazardous Products Act.

EU: This product is an article according to the REACH Regulation (1907/2006).

Australia: The products listed in this SDS are constructed using Ni-MH cell or battery and is classified as an article and is not hazardous when used according to the recommendations of the manufacturer. The hazard is associated with the contents of the cell. If the cell or battery is compromised and starts to leak, based upon the battery ingredients the contents are classified as hazardous according to the criteria of the National Occupational Health and Safety Commission stated by SafeWork Australia.

Taiwan: This product is not classified as a dangerous good.

Japan: This product is not classified as a dangerous good.

China: This product is not classified as a dangerous good.

Brazil: This product is an article according to ABNT NRB 14725-2:2009

Cell Component	Chemical Name	Mass Range (Weight %)*
Electrolyte Salt	Nickle (powder), Nickel Hydroxide	1~5
Electrolyte Solvents	Nickel-Cobalt Zinc Oxide, Nickle	5~20
Base	Carbon Black, Potassium Hydroxide, Sodium Hydroxide, Lithium Hydroxide	1~15
Cathode	Manganese, Nickel, Aluminum, Iron	20~50
Anode	Graphite, Carbon Black	13~18

(* Quantities may vary depending on battery model)

SECTION IV - FIRST-AID MEASURES

4.1 Description of First Aid Measures:

The hazardous component in secondary battery packs are in the internally sealed cells. **The following measures are only applicable if the cells have been abused/damaged causing exposure of hazardous materials noted under section three.**

Ingestion: Have the victim rinse mouth thoroughly. Do not induce vomiting. Contact your local poison control center. Immediately seek medical attention.

Inhalation: Remove victim from exposure to chemicals and into the fresh air. Immediately seek medical attention.

Skin Contact: Immediately flush with water. Immediately seek medical attention.

Eye Contact: If eye contact with the contents of a vented cell immediately flush eyes with water. Immediately seek medical attention.

Protection for First Aiders: Do not expose yourself to corrosive vapor-contaminated areas without a respirator.

First Aid Facilities: Eye wash bottle, fountain and safety showers (running water).

4.2 Most Important Symptoms & Effects Caused by Exposure:

Ingestion of cell contents may cause gastrointestinal tract irritation or even vomiting. Inhalation of vented cell vapors may lead to severe irritation of the mouth and upper respiratory tract causing a burning/pain sensation or inflammation in the nose and throat. Inhalation could also cause coughing or difficulty breathing. Eye contact may cause severe eye irritation, eye burning/pain and even possible irreversible damage. Skin contact may lead to irritation and possible chemical burns.

SECTION V - FIRE FIGHTING MEASURES

5.1 Extinguishing Media:

Suitable Extinguishing Media: Water, Fire Extinguishing Powder, Nitrogen Gas, Carbon Dioxide, or Foam.

Unsuitable Extinguishing Media: Oxidizing agents, reducing agents, acids or alkalis.

Explosion Data: Closed containers may explode when exposed to temperatures above 120°C (248°F).

Hazchem Code: 4W (Australia, New Zealand and Malaysia)

Sensitivity to Mechanical Impact: Extreme mechanical abuse could cause venting of the cells.

Sensitivity to Static Discharge: If electrolyte is exposed to electrostatic discharge it could ignite.

TDG/DOT ERG Code:147

5.2 Special Hazards Arising from the Chemical:

None

5.3 Specific Method for Fire Fighting:

When battery cells combust they tend to ignite other cells in the adjacent area. Prevent this by flooding the area with Carbon Dioxide, Foam, Nitrogen Gas or Fire Extinguishing Powder. Although use of water will extinguish flame it may create hydrogen-fluoride gas.

5.4 Special Protective Equipment for Fire Fighters:

Respiratory Protection: Self-contained Breathing Apparatus

Hand Protection: Protective Gloves

Eye Protection: Full Face Breathing Apparatus or Goggles

Body Protection: Protective Uniform

SECTION VI - ACCIDENTAL RELEASE MEASURES

If battery packs internal cells become damaged, they could possibly leak minuscule amounts of contaminants. The following procedures list precautions and steps to cleaning these contaminants.

6.1 Personal Precautions:

Quarantine contaminated area at 33 feet (10 meters) radius from the center of contamination. Don protective equipment and clothing listed in Section 8.2.

6.2 Environmental Precautions:

Cover spilled materials with absorbent non-reactive material (ie. vermiculite). Keep contaminated non-reactive material away from soil, sewers or waterways. Inform appropriate authorities if contamination occurs.

6.3 Methods for Clean Up:

Quarantine contaminated area at 33 feet (10 meters) radius from the center of contamination. Don protective equipment and clothing listed in Section 8. Do not touch Spilled material. Use only non-sparking tools and equipment. Do not expose spilled material to moisture. Seal all possible locations where contaminants might migrate into the environment. Clean up solids and place them into a waste container safe for disposing of contaminated trash. Clean up spilled liquids with vermiculite and place them into the same container. Appropriately transport contaminated material to a waste facility capable of handling contaminated materials.

6.4 Precautions to Prevent Secondary Hazard:

Avoid the release of collected materials. Do not bring the collected materials near open flame. Seal contaminants into a waste container safe for disposing of contaminated trash. Transport contaminants to an appropriate waste facility.

SECTION VII - HANDLING AND STORAGE

7.1 Precautions for Safe Handling:

Avoid shorting the battery. Do not immerse in water. Do not disassemble or deform the battery. Do not expose to, or dispose of the battery in fire. Avoid excessive physical shock or vibration. Keep out of the reach of children. Battery must be charged in an approved charger. Never use a modified or damaged charger. Use for specified product applications only. Store in a cool, dry and well-ventilated area. Never use a battery that has suffered abuse. Refer to data sheet for safe operating instructions.

7.2 Conditions for Safe Storage:

Store battery packs in a cool (25°C+/-5°C), Dry (<85% Humidity) well ventilated area. Keep battery packs in packaging material to prevent exposure to elements and conductive material.

Do not store battery packs near heat, high humidity, open flame, sunlight, water, seawater, strong acids, strong oxidizers, strong reducing agents, strong alkalis or metal wire.

7.3 Specific End Uses:

Rechargeable Smart Battery Packs are used across a wide market scope as a DC power supply for portable electronic devices.

SECTION VIII - EXPOSURE CONTROLS, PERSONAL PROTECTION

Under routine operation none of these safety procedures or equipment are required. Take the following safety measures only if the internal cells are comprised and leak or vent.

8.1 Exposure Control Measures:

Exposure Limit Values- ACGIH does not mention electrolyte as a controlled method. Not applicable.

Biological Monitoring-Not Applicable.

Control Banding- Not Applicable.

Recommended Monitoring Procedures- Follow standard monitoring procedures.

Derived no-effect level- Not Applicable.

Derived minimal effect level- Not Applicable.

Predicted no-effect concentrations- Not Applicable.

8.2 Personal Protective Equipment:

Engineering Controls- Special ventilation is only required if cell venting occurs.

Eye and Face Protection- Wear chemical resistant safety goggles or face shield.

Hand Protection- Wear chemical resistant gloves.

Skin Protection- Wear long sleeved clothing. Solid clothing should be washed with detergent.

Respiratory Protection- Wear an approved half face inorganic vapor, gas, acid and particulate respirator.

Thermal Protection- Not Applicable.

Hygiene Measures- Do not eat, drink or smoke in work areas.

Environmental Exposure Controls- Do not release into the environment.

SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES

Physical State- Sealed Solid
Appearance- Small Battery Pack
pH- Not Applicable
Relative Density- Not Applicable
Boiling Point- Not Applicable
Melting Point- Not Applicable
Viscosity- Not Applicable
Oxidizing Properties- Not Applicable
Flash Point- Not Applicable
Water Partition- Not Applicable
Vapor Pressure- Not Applicable
Vapor Density- Not Applicable
Solubility in Water- Insoluble
Water Distribution Coefficient- Not Applicable
Odor Type- Odorless
Odor Threshold- Not Applicable
Evaporation Rate- Not Applicable
Auto Ignition Temperature- Not Applicable
Flammability Limits- Not Applicable
Decomposition Temperature- 90°C

SECTION X - STABILITY AND REACTIVITY

10.1 Stability and Reactivity:

Stability- The battery packs manufactured by Inspired Energy are completely stable under normal use and in normal storage conditions.

Reactivity- The internal cells within the battery packs may become unstable due to abusive conditions.

Conditions to Avoid- Avoid shorting the battery. Do not immerse in water. Do not disassemble or deform the battery. Do not expose to, or dispose of the battery in fire. Avoid excessive physical shock or vibration. Keep out of the reach of children. Battery must be charged in approved charger. Never use a modified or damaged charger. For specified product use only. Store in a cool, dry and well-ventilated area. Never use a battery that has suffered abuse. Refer to data sheet for safe operating instructions.

Incompatible Materials- Do not immerse in water or any other high corrosive conductive liquid.

Hazardous, Decomposition Products- Internal cells may decompose to hydrogen fluoride, phosphorous oxides, sulfur oxides, sulfuric acid, lithium hydroxide, carbon monoxide and carbon dioxide.

SECTION XI - TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological Effects:

The battery packs manufactured by Inspired Energy present no toxicological effects under normal use. The hazardous components of the battery packs are within the internal cell. Within recommended conditions the electrode materials and liquid electrolytes do not react when the cell remains sealed. Exposure to these hazardous components is only possible if the battery leaks or vents. The following toxicology data is in respect to a person coming into contact with exposed electrolyte of the cell.

11.2 Acute Toxicity:

Swallowed- The electrolyte contained within the cells of the battery pack is a corrosive material. Ingestion of this electrolyte would be harmful. Swallowing may result in nausea, vomiting, diarrhea, abdominal pain and chemical burns in the gastrointestinal tract. During normal usage ingestion of a sealed battery pack is physically impossible.

11.3 Skin Corrosion or Irritation:

The electrolyte contained within the cells of the battery pack is a corrosive liquid. If this corrosive liquid make contact to your skin they could cause irritation or even severe chemical burns. A sealed battery presents no danger to a person's hand or skin.

11.4 Serious Eye Damage or Irritation:

The electrolyte contained within the cells of the battery pack is a corrosive liquid. If this electrolyte makes, contact with the eye it could cause irritation or even irreversible damage to the eye. A sealed battery presents no danger to eyes.

11.5 Respiratory or Skin Sensitization:

Cell electrolyte is GHS: Category 1. A sealed battery presents no danger to a person's skin.

11.6 Germ Cell Mutagenicity:

Unknown.

11.7 Carcinogenicity:

The electrolyte contained within the cell of a battery pack is not considered by the cell manufacture to be a carcinogen.

11.8 Reproductive Toxicity:

Cell electrolyte is GHS: Category 1B, adverse effect on reproductive competence or the fetus might occur. A sealed battery presents no danger or effect to the human reproductive system.

11.9 Specific Target Organ Toxicity (STOT) - Single Exposure:

Inhalation of vapors from a leaking cell within a battery pack will cause irritation or even severe pain to the mouth and respiratory tract. Sealed battery packs present no organ toxicity.

11.10 Specific Target Organ Toxicity (STOT) - Repeated Exposure:

Unknown.

11.11 Aspiration Hazards:

The electrolyte contained within the cell of the battery pack presents no aspiration concern. Although if the electrolyte is swallowed vomiting could occur and cause aspiration into the lungs.

SECTION XII - ECOLOGICAL INFORMATION

12.1 Ecotoxicity: A sealed battery pack does not pose any ecotoxicity hazard. The internal cells under normal use and conditions pose no ecotoxicity hazard. In the rare case the cells seal is broken or damaged the cell could leak electrolyte. If this electrolyte reacts with water it could potentially cause damage to flora and fauna. Follow the steps under Section 13 to insure cells are disposed of properly.

12.2 Persistence and Degradability: No data available.

12.3 Bio Accumulative Potential: Not applicable.

12.4 Mobility in Soil: No data available.

12.5 Results of PBT and vPvB Assessment: Not applicable.

SECTION XIII - DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods: Recycling of Inspired Energy's Smart Battery Packs is strongly encouraged. Every battery has instructions for contacting the Rechargeable Battery Recycling Corp (RBRC) to ensure the appropriate recycling method within the USA. Every battery has the appropriate symbols to direct appropriate disposal in Europe. The battery packs internal cell's contents should not be released into the environment, do not dump into any sewers, on the ground or into any body of water. Do not dispose of battery packs in fire. Used battery packs should be stored in their original packaging. Ensure packs are stored in a manner to prevent short circuit of the cells. Battery pack should be fully discharged before recycling. Do not break battery pack open before disposal.

13.2 Classification of Waste to comply with Waste Regulations:

USA: Expended batteries are not considered hazardous waste. Cells and batteries involved in a fire may be considered to be hazardous waste. Dispose of in accordance with local, state and federal laws and regulations. Consult universal/hazardous waste regulations for further information regarding disposal of spent batteries. If the internal cells are leaking/broken open, consult hazardous waste regulations under US Environmental Protection Agency's Resource Conservation and Recovery Act (RCRA). Also, consult state and local regulations for further disposal requirements.



Inspired Energy is a committed partner in Call2recycle's Rechargeable Battery Recycling Corporation (RBRC) program. Promoting the recycling of battery packs by providing a toll-free telephone number to call and receive information to the nearest local recycling facility.

Canada: Expended battery packs are not considered hazardous waste. Cells and batteries involved in a fire may be considered to be hazardous waste. Dispose of in accordance with local, provincial and federal laws and regulations. Consult the Canadian Environmental Protection Act for additional details.

EU: Expended battery pack waste must be disposed of in accordance with relevant EC Directives and national, regional and local environmental control regulations. For disposal within the EC, the appropriate code according to the European Waste Catalogue (EWC) should be used. EU Waste Code: 16 06 05 – other batteries and accumulators.

Australia: Expended battery packs must be taken for recycling or disposal at an appropriate collection depot by suitably licensed contractors in accordance with government regulations.

Taiwan: Expended battery packs are not considered hazardous waste. Cells and batteries should be recycled at an appropriate collection site in accordance with government regulations.

Japan: Recycling of expended Ni-MH battery packs is regulated by the Wastes Disposal and Public Cleaning Law and the Law for Promotion of Effective Utilization.

Brazil: Expended battery packs should be recycled in accordance to the National Solid Waste Policy (PNRS) or CONAMA in compliance with the directives and regulations of the National System of Environmental (SISNAMA).

13.3 Classification of Waste to comply with Transport Regulations: Expended Ni-MH Battery packs are not considered hazardous waste. Ni-MH battery packs that have been involved in a fire maybe considered hazardous waste and should be marked and classified as such.

13.4 Classification of Waste Packaging Material: Under normal use packaging is not consider hazardous and should be disposed of in accordance with local recycling regulations. Packaging that has been exposed to a damaged leaking cell should be considered hazardous waste and disposed of in accordance to local rules and regulations.

SECTION XIV - TRANSPORT INFORMATION

14.1 UN Number: 3496

UN Testing: UN *Manual of Tests and Criteria*, Part III subsection 38.3 **ST/SG/AC.10/C/3/2010 5th Edition**: All battery assemblies noted in Section 1.1 have been tested to meet the referenced standard.

14.2 UN Proper Shipping Name: 3496 – Batteries, Nickel Metal Hydride (with or without equipment)

14.3 Transport Hazard Classes:

Class: 9

Subsidiary Risk: None

Labels: Class 9 (3496) Label

Hazard No. (ADR): 9 (A199)

Tunnel Restriction Code: E

ERG Code: 9L

14.4 Packing Group: II

14.5 Environmental Hazards: None

14.6 Special Precautions for User: Read Safety Data Sheet and Specification Data sheet before use.

14.7 Transport in bulk IBC Code: No applicable code.

SECTION XV - REGULATORY INFORMATION

15.1 Safety, Health and Environmental Regulations/ Legislation:

United States Federal and State Regulations: TSCA Status: All ingredients in these products are listed on the TSCA inventory. **OSHA:** These products do not meet criteria as per Part 1910.1200, manufactured article. **SARA EPA Title III:** None. **Sec. 302/304:** None. **Sec. 311/312:** None. **Sec. 313:** None. **CERCLA RQ:** None.

Canadian Federal Regulations: These products have been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. **WHMIS Classification:** Not Controlled, manufactured article. **New Substance Notification Regulations:** All ingredients in the product are listed, as required, on Canada's Domestic Substances List (DSL).

National Pollutant Release Inventory (NPRI) Substances: These products do not contain any NPRI chemicals.

EU Regulations: Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I: Not listed. Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex II: Not listed. Regulation (EC) No. 850/2004 on persistent organic pollutants, Annex I as amended: Not listed. Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 1 as amended: Not listed. Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 2 as amended: Not listed. Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 3 as amended: Not listed. Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex V as amended: Not listed. Regulation (EC) No. 166/2006, REACH Article 59(10) Candidate List as currently published by ECHA: Not listed. **EU Authorizations:** Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended: Not listed. **EU Restrictions on use:** Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended: Aluminum (CAS 7429-90-5) Directive 2004/37/EC: on the safety and health of pregnant workers and workers who have recently given birth or are breastfeeding: Not listed. **Other EU Regulations** Directive 96/82/EC (Seveso II) on the control of major accident hazards involving dangerous substances: Not listed. Directive 94/33/EC on the protection of young people at work: Not listed. FSSF00058AG Inspired Energy's Page 7 of 9 December 2016 This Safety Data Sheet complies with the requirements of Regulation (EC) No. 1907/2006 and amended on 28 May 2015 by (EU) 2015/830. **Australia and**

New Zealand SUSMP: Not applicable **AICS:** All ingredients are on the AICS list. **HSNO Approval number:** Not applicable **HSNO Group Title:** Not applicable **NOHSC:10008 Risk Phrases:** R34 - Causes Burns. **NOHSC:1008 Safety Phrases:** S1 – Keep locked up. S2 – Keep out of reach of children. S23 – Do not breathe vapor. S24/25 – Avoid contact with skin and eyes. S26 – In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S27/28 – After contact with skin, take off immediately all contaminated clothing and wash immediately with plenty of water. S36/37/39 – Wear suitable protective clothing, gloves and eye/face protection. S56 – Dispose of this material and its container at hazardous waste or special waste collection point. S62 – If swallowed, DO NOT induce vomiting: seek medical advice immediately and show this container or label. S64 – If swallowed, rinse mouth with water (Only if the person is conscious). **EC Classification for the Substance/Preparation:** These products are not classified as hazardous according to Regulation (EC) No. 1272/2008. Keep out of the reach of children. **Japanese Regulations** Japanese Industrial Standards (JIS) JIS Z 7253:2012 Waste disposal and public cleaning law Law for Promotion of Effective Utilization of Resources **Taiwanese Regulations** Regulation of Labelling and Hazard Communication of Dangerous and Harmful Materials: Labeling requirements and other relevant provision of chemicals, this product is not classified as dangerous goods. Toxic Chemicals Substance Control Law: Not Listed. **Chinese Regulations** General Rule for Classification and Hazard Communication of Chemicals (GB 13690-2009): Specifies the classification, labeling and hazard communication of chemicals in compliance with the GHS standard for chemical production sites and labeling of consumer goods. General Rule for Preparation of Precautionary Labels for Chemicals (GB 15258-2009): Specifies the relevant application methods of precautionary labels for chemicals. Safety Data Sheet for Chemical Products Content and Order of Sections (GB/T 16483-2008). **Brazil Regulations:** National Solid Waste Policy (PNRS of CONAMA in compliance with the directives and regulations of National System for the Environment (SISNAMA).

15.2 Chemical Safety Assessment: Not applicable.

SECTION XVI - OTHER INFORMATION

Preparation Date: January 1, 2017

Prepared by: Inspired Energy's Compliance Department

Revision: V1- Initial Release

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