# SAFETY DATA SHEET

Issuing Date No data available Revision Date 03-Dec-2014 Revision Number 1

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# 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

**Product identifier** 

Product Name China made Vial Liquid

Other means of identification

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use Filled vial is installed in Tools for Leveling

Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier NameJohnson Level & ToolSupplier Address6333 W Donges Bay Rd

Mequon WI 53092 US

Supplier Phone Number Phone:770-862-2603

Contact Phone770-862-2603

Supplier Email eronheflin@mphsales.com

Emergency telephone number

### 2. HAZARDS IDENTIFICATION

### Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Carcinogenicity	Category 2
Flammable liquids	Category 3

### GHS Label elements, including precautionary statements



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#### **Emergency Overview**

### Signal word

Warning

#### **Hazard Statements**

Suspected of causing cancer Flammable liquid and vapor



**Appearance** Yellow

Physical State Liquid

Odor Petroleum distillates

### **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

Keep away from heat/sparks/open flames/hot surfaces. - No smoking

Keep container tightly closed

Ground/bond container and receiving equipment

Use explosion-proof electrical/ ventilating/ lighting/ equipment

Use only non-sparking tools

Take precautionary measures against static discharge

### **Precautionary Statements - Response**

IF exposed or concerned: Get medical advice/attention

#### Skin

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

#### Fire

In case of fire: Use CO2, dry chemical, or foam for extinction

### **Precautionary Statements - Storage**

Store locked up

Store in a well-ventilated place. Keep cool

#### **Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

### **Hazards not otherwise classified (HNOC)**

Not applicable

### **Unknown Toxicity**

0.0153% of the mixture consists of ingredient(s) of unknown toxicity

#### **Other information**

PROLONGED OR REPEATED CONTACT MAY DRY SKIN AND CAUSE IRRITATION



#### **Interactions with Other Chemicals**

No information available.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%	Trade Secret
Fuels, jet aircraft, coal solvent extraction,	94114-58-6	60 - 100	*
hydrocracked hydrogenated			
Jet engine fuel produced by hydrogenation of the			
middle distillate fraction of the products of			
hydrocracking of coal extract or			

<sup>\*</sup>The exact percentage (concentration) of composition has been withheld as a trade secret

### 4. FIRST AID MEASURES

#### First aid measures

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15

minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove

contact lenses, if present and easy to do. Continue rinsing.

**Skin Contact** Wash off immediately with soap and plenty of water while removing all

contaminated clothes and shoes.

**Inhalation** Remove to fresh air.

**Ingestion** Rinse mouth immediately and drink plenty of water. Never give anything by mouth

to an unconscious person.

**Self-protection of the first aider** Remove all sources of ignition. Ensure that medical personnel are aware of the

material(s) involved, take precautions to protect themselves and prevent spread of contamination. Use personal protective equipment as required. Wear personal

protective clothing (see section 8).

#### Most important symptoms and effects, both acute and delayed

**Most Important Symptoms and** No information available. **Effects** 

### Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

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### 5. FIRE-FIGHTING MEASURES

### **Suitable Extinguishing Media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Dry chemical. Carbon dioxide (CO2). Water spray. Alcohol resistant foam.

### Unsuitable extinguishing media

CAUTION: Use of water spray when fighting fire may be inefficient.

### **Specific Hazards Arising from the Chemical**

Risk of ignition. Keep product and empty container away from heat and sources of ignition. In the event of fire, cool tanks with water spray. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Uniform Fire Code Combustible Liquid: III-A

#### **Hazardous Combustion Products**

Carbon oxides.

### **Explosion Data**

Sensitivity to Mechanical Impact No.

Sensitivity to Static Discharge Yes.

### 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.





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### 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

**Personal Precautions** Evacuate personnel to safe areas. Use personal protective equipment as required. See

section 8 for more information. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the

product must be grounded. Do not touch or walk through spilled material.

Other Information Refer to protective measures listed in Sections 7 and 8. Ventilate the area.

**Environmental Precautions** 

Environmental Precautions Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage

if safe to do so. Prevent product from entering drains.

Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so. Do not touch or walk through spilled

material. A vapor suppressing foam may be used to reduce vapors. Dike far ahead of spill

to collect runoff water. Keep out of drains, sewers, ditches and waterways.

Methods for cleaning up Take precautionary measures against static discharges. Dam up. Soak up with inert

absorbent material. Pick up and transfer to properly labeled containers.

### 7. HANDLING AND STORAGE

### Precautions for safe handling

Handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with

skin, eyes or clothing. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Use personal protection equipment. Avoid breathing vapors or mists. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use grounding and bonding connection when transferring this material to prevent static discharge, fire or explosion. Use with local exhaust ventilation. Use spark-proof tools and explosion-proof equipment. Keep in an area equipped with sprinklers. Use according to

package label instructions.

Conditions for safe storage, including any incompatibilities

Storage Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from

heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labeled containers. Do not store near combustible materials. Keep in an area equipped with sprinklers. Store in accordance with the particular national

regulations. Store in accordance with local regulations.

**Incompatible Products**None known based on information supplied.

# 8. EXPOSURE CONTROLS/PERSONAL PROTECTION



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#### **Control parameters**

Exposure Guidelines This product, as supplied, does not contain any hazardous materials with occupational

exposure limits established by the region specific regulatory bodies

#### Appropriate engineering controls

Engineering Measures Showers

Eyewash stations Ventilation systems

### Individual protection measures, such as personal protective equipment

**Eye/Face Protection** Tight sealing safety goggles.

Skin and Body Protection Wear protective gloves and protective clothing. Long sleeved clothing. Chemical resistant

apron. Impervious gloves. Antistatic boots.

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.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or

smoke when using this product. Wash hands before breaks and immediately after handling the product. Contaminated work clothing should not be allowed out of the workplace.

Regular cleaning of equipment, work area and clothing is recommended.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

### **Physical and Chemical Properties**

Physical StateLiquidAppearanceYellowOdorPetroleum distillatesColorNo information availableOdor ThresholdNo information available

Property_	Values	Remarks Method
pH	UNKNOWN	None known
Melting / freezing point	No data available	None known
Boiling point / boiling range	176 °C / 349 °F	None known
Flash Point	60 C / 140 F	None known
Evaporation Rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		
Upper flammability limit	No data available	
Lower flammability limit	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	Negligible	None known
Solubility in other solvents	No data available	None known
Partition coefficient: n-octanol/wat	erNo data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known





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**Explosive properties**Oxidizing Properties
No data available
No data available

**Other Information** 

Softening PointNo data availableVOC Content (%)No data availableParticle SizeNo data available

**Particle Size Distribution** 

### 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**

Heat, flames and sparks.

#### **Incompatible materials**

None known based on information supplied.

#### **Hazardous Decomposition Products**

Carbon oxides.

# 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

Product Information

**Inhalation** Specific test data for the substance or mixture is not available.

**Eye Contact** Specific test data for the substance or mixture is not available.

**Skin Contact** Specific test data for the substance or mixture is not available.

**Ingestion** Specific test data for the substance or mixture is not available.

**Component Information** 

### Information on toxicological effects



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**Symptoms** No information available.

#### Delayed and immediate effects as well as chronic effects from short and long-term exposure

**Sensitization** No information available.

Mutagenic Effects No information available.

**Carcinogenicity** Contains no ingredient listed as a carcinogen.

Reproductive Toxicity No information available.

**STOT - single exposure** No information available.

**STOT - repeated exposure**No information available.

**Chronic Toxicity** Contains a known or suspected carcinogen.

Target Organ Effects Respiratory system. Eyes. Skin. Gastrointestinal tract (GI).

**Aspiration Hazard** No information available.

Numerical measures of toxicity Product Information

The following values are calculated based on chapter 3.1 of the GHS document

Not applicable

### 12. ECOLOGICAL INFORMATION

### **Ecotoxicity**

The environmental impact of this product has not been fully investigated.

### **Persistence and Degradability**

No information available.

### **Bioaccumulation**

No information available

### Other adverse effects

No information available.

**(II)** 

### 13. DISPOSAL CONSIDERATIONS

#### Waste treatment methods

Disposal methods This material, as supplied, is not a hazardous waste according to Federal regulations (40

CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local

regulations for additional requirements.

**Contaminated Packaging** Dispose of contents/containers in accordance with local regulations.

California Hazardous Waste Codes 331

### 14. TRANSPORT INFORMATION

<u>DOT</u> NOT REGULATED

Proper Shipping Name NON REGULATED

Hazard Class N/A

TDG Not regulated

MEX Not regulated

<u>ICAO</u> Not regulated

IATA Not regulated

Proper Shipping Name NON REGULATED

Hazard Class N/A

IMDG/IMO Not regulated

Hazard Class N/A

RID Not regulated

ADR Not regulated

ADN Not regulated

# 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 does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

#### SARA 311/312 Hazard Categories

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

### **CWA (Clean Water Act)**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

### **CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

### **US State Regulations**

### **California Proposition 65**

This product does not contain any Proposition 65 chemicals.

### U.S. State Right-to-Know Regulations

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Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	Illinois
Fuels, jet aircraft, coal solvent extraction, hydrocracked	X				
hydrogenated					
Jet engine fuel produced by hydrogenation of the middle					
distillate fraction of the products of hydrocracking of coal					
extract or					
94114-58-6					

### International Regulations

#### Canada

### **WHMIS Hazard Class**

B3 - Combustible liquid D2A - Very toxic materials



# **16. OTHER INFORMATION**



NFPA Health Hazards 1 Flammability 2 Instability 0 Physical and

HMIS Health Hazards 1\* Flammability 2 Physical Hazard 0 Personal Protection

Χ

Chronic Hazard Star Legend \* = Chronic Health Hazard

Prepared By Product Stewardship

23 British American Blvd. Latham, NY 12110 1-800-572-6501

Revision Date 03-Dec-2014

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** 



# **Product Information Sheet**

### **Panasonic Batteries**

Panasonic Industrial Company

A Division of Panasonic Corporation of No.

A Division of Panasonic Corporation of North America 5201 Tollview Dive. 1F-3

Rolling Meadows, IL 60008
Toll Free: 877-726-2228
Fax: 847-468-5750

Internet: <a href="www.panasonic.com/batteries">www.panasonic.com/batteries</a>
e-mail: oembatteries@us.panasonic.com

**Product:** Alkaline Batteries

**Applicable models/sizes: All Cylindrical** 

and 9-Volt

Revision: January 1, 2013

The batteries referenced herein are exempt articles and are <u>not</u> subject to the OSHA Hazard Communication Standard requirement. This sheet is provided as a service to our customers.

### **MSDS**

Material Safety Data Sheets (MSDS) are a sub-requirement of the Occupational Safety and Health Administration (OSHA) Hazard Communication Standard, 29 CFR Subpart 1910.1200. This Hazard Communication Standard does not apply to various subcategories including anything defined by OSHA as an "article". OSHA has defined "article" as a manufactured item other than a fluid or particle; (i) which is formed to a specific shape or design during manufacture; (ii) which has end use function(s) dependent in whole or in part upon its shape or design during end use; and (iii) which under normal conditions of use does not release more than very small quantities, e.g. minute or trace amounts of a hazardous chemical, and does not pose a physical hazard or health risk to employees.

Because all of our batteries are defined as "articles", they are exempt from the requirements of the Hazard Communication Standard; hence a MSDS is not required.

# The following components are found in a Panasonic Alkaline battery:

Component	Material	Formula	CAS#
Positive Electrode	Manganese Dioxide	MnO <sub>2</sub>	1313-13-9
	Graphite	С	7782-42-5
Negative Electrode	Zinc	Zn	7440-66-6
Electrolyte	Potassium Hydroxide	KOH	1310-58-3

#### Disposal

All Panasonic Alkaline batteries are manufactured with "no added mercury" and are classified by the federal government as a non-hazardous waste and are safe for disposal in the normal municipal waste stream. Exception: California, which as of February 8, 2006 requires disposal of these batteries in accordance with the California Universal Waste Rules. Check local your local regulations for proper disposal.

### **Transportation**

Alkaline 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 and U.S. Department of Transportation (DOT) regulations, 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 ICAO Technical Instructions and IATA Dangerous Goods Regulations and Special Provision 130 of the DOT. These regulations require these batteries to be packed in such a way to prevent short circuits or generation of a dangerous quantity of heat. In addition, the ICAO and IATA regulations require the words "Not Restricted" and "Special Provision A123" be provided on the air waybill, when an air waybill

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is issued. By ocean the International Maritime Organization (IMO), 2010 edition, 35<sup>th</sup> Amendment, does not regulate these batteries.

## **First Aid**

If you get electrolyte in your eyes, flush with water for 15 minutes without rubbing and immediately contact a physician. If you get electrolyte on your skin wash the area immediately with soap and water. If irritation continues, contact a physician. If a battery is ingested, call the National Capital Poison Center (NCPC) at 202-625-333 (Collect) or your local poison center immediately

# **General Recommendations**

CAUTION: May explode or leak if recharged, inserted improperly, mixed with different battery types or disposed of in fire. Do not open battery.

# **Fire Safety**

In case of fire, you can use any Class of fire extinguisher. Cooling the exterior of the batteries will help prevent rupturing. Fire fighters should use self-contained breathing apparatus.

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No.199, Jinhe Road, Jinhu County, Huaian City, Jiangsu Province, 211600 P.R. China

Tel: (86)-517-86990578 Fax: (86)-517-86993678 MSDS NO:20110530

### MATERIAL SAFETY DATA SHEET

# 1. Product & company identification

1.1Company identification

Jiangsu Cel Battery Co.,Ltd.

No.199,Jinhe Road,Jinhu County,Huaian City

Jiangsu Province,211600, P.R.China.

Telephone: +86 769 82195306 Facsimile: +86 769 87982226 Home Page: www.celbattery.com Email: gavinlin@celbattery.com

Date of Preparation: May. 30th,2011

1.2Product Identification

Product Name: NI-MH Dry Battery

Trade Name: CEL or neutral or OEM brands

Chemical System: Nickel Metal Hydride Designated for Recharge: \_X\_ Yes \_\_\_\_No

### 2. Hazards identification

IMPORTANT NOTE: The battery cell is contained in a hermetically sealed case, designed to withstand temperatures and pressures encountered during normal use. As a result, during normal use, hazardous materials are fully contained inside the battery cell. The battery cell should not be opened or exposed to heat because exposure to the following ingredients contained within could be harmful under some circumstances. The following information is provided for the user's information only.

# 3. Hazardous Ingredients

Chemical Name	CAS No.	OSHA PEL (mg/m3)	ACGIH TLV (mg/m3)
Separator	Polypropylene	Bout 1% weight	, ,
Metal components	Nickel plated steel	About 15% weight	
Expanded Copper Net	Cu	About 6% weight	Pure metal
Hydrogen Storage Alloy	MH	About 30% weight	Alloy
Nickel (foam)	Ni	About 8% weight	Pure metal
Nickel Hydroxide	12054-48-7	1 TWA	1 TWA
Cobalt	7440-48-4	0.1 TWA	Dust & Fume 0.005
Lanthanum	7439-91-0	NA	NA
Cerium	7440-45-1	NA	NA

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Neodymium	7440-00-8	NA	NA	
Potassium hydroxide	1310-58-3	NA	2 Ceiling Limit	
Lithium hydroxide	1310-65-2	NA	NA	

Notes: 1. TWA is the time weighted average concentration over an 8-hour period.

# **4.**Emergency and First Aid Procedures:

Swallowing: Do not induce vomiting. Seek medical attention immediately.

Skin: If the internal cell materials of an opened battery cell come into contact with the skin, immediately flush with water for at least 15 minutes.

Inhalation: If potential for exposure to fumes or dusts occurs, remove immediately to fresh air and seek medical attention.

Eyes: If the contents from an opened battery come into contact with the eyes, immediately flush eyes with water continuously for at least 15 minutes. Seek medical attention.

### 5. Firefighting measures

If fire or explosion occurs when batteries are on charge, shut off power to charger.

In case of fire where nickel metal hydride batteries are present, apply a smothering agent such as METL-X, sand, dry ground dolomite, or soda ash, or flood the area with water. A smothering agent will extinguish burning nickel metal hydride batteries. Water may not extinguish burning batteries but will cool the adjacent batteries and control the spread of fire. Burning batteries will burn themselves out. Virtually all fires involving nickel metal hydride batteries can be controlled with water. When water is used, however, hydrogen gas may evolve. In a confined space, hydrogen gas can form an explosive mixture. In this situation, smothering agents are recommended.

Fire fighters should wear self-contained breathing apparatus. Burning nickel metal hydride batteries can produce toxic fumes including oxides of nickel, cobalt, aluminum, manganese, lanthanum, cerium,neodymium, and praseodymium.

Special Fire Fighting Procedures: Exposure to temperatures of above 21.2°c can cause venting of the liquid electrolyte. Internal shorting could also cause venting of the electrolyte. There is potential for exposure to iron, nickel, cobalt, rare earth metals (cerium, lanthanum neodymium, and praseodymium), manganese, and aluminum fumes during fire; use self-contained breathing apparatus.

# **6 Spill and Leak Procedures**

Spill and leaks are unlikely because cells are contained in a hermetically-sealed case. If the battery case is breached, don protective clothing that is impervious to caustic materials and absorb or pack spill residues in inert material. Dispose in accordance with applicable state and federal regulations.

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# 7. Precautions for Safe Handling and Use

Storage: Store in a cool place, but prevent condensation on cell or battery terminals. Elevated temperatures may result in reduced battery life. Optimum storage temperatures are between -31°F and 95°F.

Mechanical Containment: If there are special encapsulation or sealing requirements, consult your Cel Battery Co., Ltd. representative about possible cell hazard precautions or limitations.

Handling: 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. If soldering or welding to the case of the battery is required, consult your Jiangsu CEL Battery Co., Ltd. representative for proper precautions to prevent seal damage or external short circuit.

Charging: This battery is designed for recharging. A loss of voltage and capacity of batteries due to self-discharge during prolonged storage is unavoidable. Charge battery before use. Observe the specified charge rate since higher rates can cause a rise in internal gas pressure that may result in damaging heat generation or cell rupture and/or venting.

Labeling: If normal label warnings are not visible, it is important to provide a device label stating:

CAUTION: Do not dispose in fire, mix with other battery types, charge above specified rate, connect improperly, or short circuit, which may result in overheating, explosion or leakage of cell contents.

# **8.**Safe Handling and Use (Personal Protective Equipment)

Ventilation Requirements: Not required under normal use.

Respiratory Protection: Not required under normal use.

Eye Protection: Not required under normal use.

Gloves: Not required under normal use.

# 9. Physical Data for Battery

Melting point (°F)	Boiling point (°F)	% Volatile by Volume
NA	NA	NA
Vapor Pressure (mm Hg)	Evaporation Rate	Vapor Density (Air = 1)
NA	_	NA
Specific Gravity (H2O)	Solubility in Water	Appearance and Odor

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NA	l l	NA	No Odor	

# 10.Reactivity Data

The batteries are stable under normal operating conditions.

Hazardous polymerization will not occur.

Hazardous decomposition products: oxides of nickel, cobalt, manganese, lanthanum, and cerium.

Conditions to avoid: heat, open flames, sparks, and moisture.

Potential incompatibilities (i.e., materials to avoid contact with): The battery cells are encased in a non-reactive container; however, if the container is breached, avoid contact of internal battery components with acids, aldehydes, and carbamate compounds.

# 11.Health Hazard Data

Threshold Limit Values: See Section II

Effects of a Single (Acute) Overexposure:

Inhalation: During normal use inhalation is an unlikely route of exposure due to containment of hazardous materials within the battery case. However, should the batteries be exposed to extreme heat or pressures causing a breach in the battery cell case, exposure to the constituents may occur. Inhalation of cobalt dusts may result in pulmonary conditions.

Ingestion: If the battery case is breached in the digestive tract, the electrolyte may cause localized burns.

Skin Absorption: No evidence of adverse effects from available data.

Skin Contact: Exposure to the electrolyte contained inside the battery may result in chemical burns. Exposure to nickel may cause dermatitis in some sensitive individuals.

Eye Contact: Exposure to the electrolyte contained inside the battery may result in severe irritation and chemical burns.

### Carcinogenicity:

Nickel has been identified by the National Toxicology Program (NTP) as reasonably anticipated to be a carcinogen. Cobalt has been identified by IARC as a 2B carcinogen.

### Other Effects of Repeated (Chronic) Exposure:

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

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sensitive individuals.

Medical Conditions Aggravated by Overexposure:

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

# 12. Fire and Explosion Hazard Data

Flash Point: NA Lower Explosive Limit: NA Upper Explosive Limit: NA

Extinguishing Media: Any class of extinguishing medium may be used on the batteries or their packing material.

Special Fire Fighting Procedures: Exposure to temperatures of above 21.2°c can cause venting of the liquid electrolyte. Internal shorting could also cause venting of the electrolyte. There is potential for exposure to iron, nickel, cobalt, rare earth metals (cerium, lanthanum neodymium, and praseodymium), manganese, and aluminum fumes during fire; use self-contained breathing apparatus.

# 13. Recycling and Disposal

Cel Battery encourages battery recycling. Our Nickel Metal Hydride batteries are not defined by the locall government as hazardous waste and are safe for disposal in the normal municipal waste stream.

DO NOT INCINERATE or subject battery cells to temperatures in excess of 212°F. Such treatment can cause cell rupture.

## **14.**Transportation

CEL batteries are considered to be "Dry cell" batteries and are unregulated for purpose of transportation by the U.S. Department of Transportation (DOT), International Civil Aviation Administration(ICAO), International Air Transport Association(IATA) and International Maritime Dangerous Goods Regulations(IMDG). The only DOT requirement for shipping Nickel Metal Hydride batteries is Special Provision 130 which states: "Batteries, dry are not subject to the requirements of this subchapter only when they are offered for transportation in a manner that prevents the dangerous evolution of heat (for example, by the effective insulation of exposed terminals)." IATA requires that batteries being transported by air must be protected from short-circuiting and protected from movement that could lead to short-circuiting. The goods is non-hazardous materials for SEA transportation. The consignment is fully described by SEA. The batteries passed the inspection of special provision 130. And the consignment is not classified as dangerous under and already comply with the current edition of the IMDG regulations and SP304. Such batteries have been packed in inner packing in such a manner as to effectively prevent from short circuits and the movements which could lead to short circuit. And it passes the special provision A123.

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# 15. Regulatory Information

Cel sealed Nickel Metal Hydride batteries are considered to be "dry cell" batteries and are not subject to dangerous goods regulation for the purpose of transportation by the U.S. Department of Transportation (DOT), the International Civil Aviation Organization (ICAO), the International Air Transport Association (IATA) or the International Maritime Dangerous Goods regulations (IMDG).

### 16.Other information

More information concerning shipping, testing, marking and packaging can be obtained from Cel Battery Co., Ltd. representatives.

