LEXEL BATTERY (SHENZHEN) CO., LTD.
ADD: 3rd Industrial Park, Luotian Village, Songgang, Baoan, Shenzhen
(200 meters away from the Songgang exit of Longhua-Dalingshan expressway)
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MSDS Report NO.:LEXEL090101

Material safety data sheet

1. Manufacturer

Manufacture's name	: LEXEL BATTERY (SHENZHEN) CO., LTD.
Address	: 3RD INDUSTRIAL PARK,LUOTIAN VILLAGE,
	:SONGGANG,BAOAN,SHENZHEN,CHINA
Emergency Telephone Number	: 0086-755-83432950 \ 83432951
Telephone Number for Information	: 0086-755-83432950 \ 83432951
Date Prepared	: Jan,05.2009
Signature of Preparer	: Yanjun Yan
	R&D Department

2. Hazards identification:

Nickel Metal Hydride Battery are exempted from Dangerous Goods

UN- Recommendations on the Transport of Dangerous Goods Model Regulations:

(ST/SG/AC. 10/1 Rev. 14)

3. Hazardous ingredients

IMPORTANT NOTE

The battery should not be opened or exposed to heat beasure exposure of the following ingredients contained within coule be harmfull under some circumstances.

Composition	: Nickel-dihydroxide [Ni(OH)2]	27.2wt%
	: Cobalt [Co]	3.8wt %
	: Metal hydride [MH]	35.5wt%
	: Potassium-hydroxide [KOH]	2.0wt%

	: Polypropylene [PP]	1.8wt%
	: Iron [Fe]	22.7wt%
	: Water [H2O]	6.4wt%
	: Polyamide [PA66]	0.6wt%
	: Rubber [EPDM]	0.0wt%
Chemical System	: Nickel/Metal Hydride	
Designated for Recharge	: Yes	
Nominal Voltage	: 1.2V	

Note: The above information is provided for the user's information only.

4. Physical Data for Battery

Melting point(℃)	: NA
Boiling point(℃)	: NA
%Volatile by Volume	: NA
Vapor pressure (mmHg)	: NA
Evaporation Rate	: NA
Vapor Density (Air=1)	: NA
Specific Gravity (H20)	: NA
Solubility in water	: NA
Appearance and Odor	: No Odor

5. First Aid Measure

The product contains corrosive electrolyte, in case of electrolyte leakage from the battery, action described below are required.

Skin contact : Wash this contacted areas off immediately with plenty

may cause sores on the skin.

Eye contact : Flush the eyes with plenty of clean water without rubbing. Take a medical treatment. If appropriate procedures are not taken, this may cause an eye irritation.

Inhalation : Remove to fresh air immediately.
Take a medical treatment.

Extinguishing method : Since vapor, generated from burning batteries may make eyes, nose and throat irritate, be sure to extinguish the fire on the windward side. Wear the respiratory protection equipment in some cases.

Fire extinguishing agent : Dry chemical, alcohol-resistant form, carbon dioxide and plenty of water area effective.

6. Fire and Explosion Hazard Data

Flash Point : NA

Lower Explosive Limit : NA

Upper Explosive Limit : NA

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

Special Fire Fighting Procedures : Exposure to temperatures of above 100℃ 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, manganese, and aluminum fumes during fire; use self-contained breathing apparatus.

7. Accidential Release

stepts to be taken in case material is released or spilled:

The preferred respinse is to leave the area and allow the barreries to cool and the vapours to dissipate.Avoid skin and eye contact or inhalation of vapours.Collect all released material in a plastic lined metal container and remove spilled liquid with absorbent.Doing this,protect your skin and eyes with gloves and protection glasses.

8. Handling and storage

1) When packing the batteries, do not allow battery terminates to contact each other, or contact with other metals. Be sure to pack batteries by providing in the packaging box, or in a separate plastic bag so that the single batteries are not mixed together.
2) Use strong materials for packaging boxes so that they will not be damaged by vibration, impact, dropping and stacking during their transportation.
3) Do not let water penetrate into packaging boxes during their storage and transportation.
4) The batteries will be stored at room temperature.
5) Do not store the battery in places of the high temperature exceeding 35deg.C or under direct sunlight or in front of a stove. Please also avoid the places of high humidity. Be sure not to expose the battery to condensation, water drop or not to store it under lower temperature than -20℃.
6) Batteries are sure to be packed in such a way to prevent short circuits under conditions normally encountered in transport.
7) Please avoid storing the battery in the place where it is exposed to the electricity, so that no damage will be caused to the protection circuit of the battery pack.

9. Exposure controls/personal protection

Respiratory protection(specify type)	Not necessary under conditions of normal use
Ventilation:	Not necessary under conditions of normal use

Protective gloves:	Not necessary under conditions of normal use
Eye protection:	Not necessary under conditions of normal use
Other protective clothing or equipment:	Not necessary under conditions of normal use

10. Physical & chemical properties

The chemicals mentioned in Section 3 are contained in a hermetically sealed can.Under conditions of normal use,the chemicals will not be released.

11. Stability & reactivity

Nickel Metal Hydride Batteries are contained in a stable stell container and are hermetically sealed to avoid any chemical release under conditions of normal use.

12. Health Hazard Data

Skin contact	: Exposure to the electrolyte contained inside the battery may result in chemical burn, 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.
Ingestion	: If the battery case is breached in the digestive tract, the electrolyte may cause localized burns.
Inhalation	:During normal use inhalation is an unlikely route of exposure due to containment of hazardous materials within battery case.

13. Reactivity Data

1) The batteries are stable under normal operating condition.
2) Hazardous polymerization will not occur
3) Hazardous decomposition products: Nickel-dihydroxide, cobalt, Metal hydride

4) Conditions to avoid: heat, open flames, sparks, and moisture.
5) Incompatibilities (materials to avoid):The battery cells are encased in a non-reactive container; if the container is breached, avoid contact of internal battery components with acids, aldehydes, and carbonate compounds.

14. Transport Information

LEXEL batteries are considered to be "Dry cell" batteries and are unregulated for purposes 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 requirements for shipping these 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). As of 1/1/97 IATA requires that batteries being transported by air must be protected from short-circuiting and protected from movement that could lead to short-circuiting.

"We hereby ceritfy that the consignment is not classified as dangerous under the current edition of the IATA . Dangerous Goods Regulations A123 under 50th Edition and all applicable carrier and governmental regulations".

15. Regulatory Information:

- IATA DGR A123-2009 dangerous goods regulations
- ICAO Technical Instructions for the safe transport of dangerous goods by air.
- in inner packing in such matter as to effectively prevent Short circuits and to prevent movements which could lead to short circuits.

16. Reference

- UN- Recommendations on the Transport of Dangerous Goods Model Regulations: (ST/SG/AC. 10/1 Rev. 14)