COUNTERMINE

Minelab Electronics Pty. Ltd

2 Second Ave., Mawson Lakes
South Australia 5095

Telephone: +61 8 8238 0888
Email: countermine@minelab.com.au
Web: www.minelab.com

MINELAB

0303-0040 Battery D cell Rechargeable NiMH 1.2v 7a

Minelab supply all new F3 detectors with a set of (4) D cell batteries. The customer has the option of selecting single use alkaline batteries or rechargeable batteries, to be supplied with the F3 detector.

Minelab's D cell rechargeable battery is also supplied as an accessory.

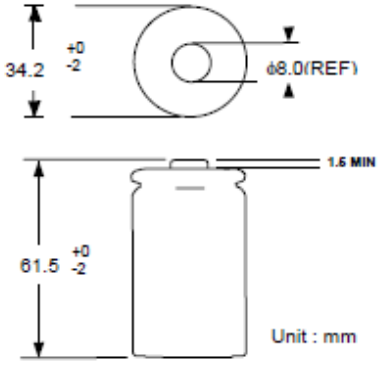
Description

This battery is a Rechargeable Nickel Metal Hydride Cylindrical cell with a nominal voltage of 1.2 volts and a capacity of 7,000mAh (7 Amp hours)

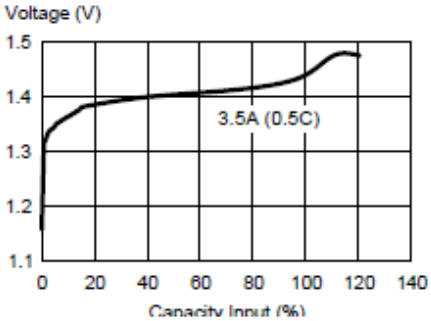
Data Sheet — *Model No.: 700DHC*

Type	:	Rechargeable Nickel Metal Hydrid Cylindrical Cell
Model	:	GP700DHC
Nominal Dimension (with Sleeve)	:	∅ = 34.2mm H = 61.5mm
Application	:	Recommended discharge current 3500mA to 21A
Nominal Voltage	:	1.2V
Nominal Capacity	:	Min.: 6800mAh Typical: 7000 mAh when discharged at 1400mA to 1.0V at 20°C
Charging Condition	:	700mA for 16 hrs at 20°C
Fast charge	:	1.4A to 3.5A (0.2C to 0.5C) with charge termination control Recommended control parameter: -delta V: 0 - 5mV dT/dt: 0.8 deg.C/min TCO: 40-50 deg. C Timer: 105% nominal input
Service Life	:	>500 cycles (IEC 61951-2) Up to 1000 cycles (not less than 60% of nominal at 0.1C charge/ 0.2C discharge)
Continuous Overcharge	:	700mA maximum current No conspicuous deformation and /or leakage
Weight	:	155g
Internal Resistance	:	Average 8mΩ upon fully charged (Range : 5-10mΩ) at 1000Hz
Max. Charging Voltage	:	1.5V at 700mA charging
Temperature Range	:	Standard charging : 0 to 40°C Fast charging : 10 to 40°C Discharging : -20 to 50°C Storage : -20 to 35°C Storage (1 week) : -20 to 60°C

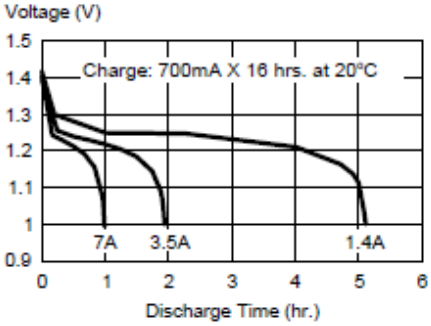
*



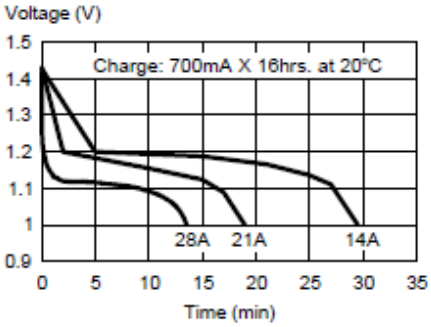
Fast Charge (Charge Control Required)



Low Rate Discharge



High Rate Discharge



* The information (subject to change without prior notice) contained in this document is for reference only and should not be used as a basis for product described guarantee or warranty. For applications other than those here, please consult your nearest GP Sales and Marketing Office or Distributors.

MSDS

Material Safety Data Sheet for GP Nickel Cadmium Battery

IDENTITY (As Used on Label and List) NiCd batteries	Note : Blank spaces are not permitted if any item is not applicable or no information is available, the space must be marked to indicate that.

Section 1- Identification

Manufacturer's Name GPI International Ltd.	Emergency Telephone Number
Address (Number, Street, City State, and ZIP Code) 8/F GP Building, 30 Kwai Wing Road,	Telephone Number for information 852-2484-3333
Kwai Chung, N.T. H.K.	Date of prepared and revision Jan 2, 2014
	Signature of Prepare (optional)

Section 2 – Hazards Identification

Classification:

N.A.

Section 3 – Composition/Information On Ingredients

Hazardous Components:

Description:	Approximate % of total weight	
Lead	: <0.004	Wt%
Mercury	: <0.0005	Wt%
Cadmium Oxide	: <8-25	Wt%
Nickel Hydroxide	:14%-21%	Wt%
30%KOH solution (Potassium Hydroxide)	: 9-16%	Wt%

Section 4 – First Aid Measures

First Aid Procedures

If electrolyte leakage occurs and makes contact with skin, wash with plenty of water immediately.

If electrolyte comes into contact with eyes, wash with copious amounts of water for fifteen (15) minutes, and contact a physician.

If electrolyte vapors are inhaled, provide fresh air and seek medical attention if respiratory irritation develops. Ventilate the contaminated area.

Section 5 – Fire-Fighting Measures

Flash Point (Method Used)	Ignition Temp.	Flammable Limits	LEL	UEL
N.A.	N.A.	N.A.	N.A.	N.A.

Extinguishing Media

Carbon Dioxide, Dry Chemical or Foam extinguishers

Special Fire Fighting Procedures

N.A.

Unusual Fire and Explosion Hazards

Do not dispose of battery in fire - may explode.

Do not short-circuit battery - may cause burns.

Section 6 – Accidental Release Measures

Steps to Be Taken in Case Material is Released or Spilled

Batteries that are leakage should be handled with rubber gloves.

Avoid direct contact with electrolyte.

Wear protective clothing and a positive pressure Self-Contained Breathing Apparatus (SCBA).

Section 7 – Handling and Storage

Safe handling and storage advice

Batteries should be handled and stored carefully to avoid short circuits.

Do not store in disorderly fashion, or allow metal objects to be mixed with stored batteries.

Never disassemble a battery.

Do not breathe cell vapors or touch internal material with bare hands.

The cells and batteries shall not be stored in high temperature ,the maximum temperature allowed is 60• •for a short period during the shipment , Otherwise the cells maybe leakage and can result in shortened service life..

Section 8– Exposure Controls / Person Protection

Occupational Exposure Limits: LTEP N.A.		STEP N.A.
Respiratory Protection (Specify Type) N.A.		
Ventilation	Local Exhausts N.A.	Special N.A.
	Mechanical (General) N.A.	Other N.A.
Protective Gloves N.A.		Eye Protection N.A.
Other Protective Clothing or Equipment N.A.		
Work / Hygienic Practices N.A.		

Section 9 - Physical / Chemical Properties

Boiling Point N.A.	Specific Gravity (H_2O=1) N.A.
Vapor Pressure (mm Hg) N.A.	Melting Point N.A.
Vapor Density (AIR=1) N.A.	Evaporation Rate (Butyl Acetate) N.A.
Solubility in Water N.A.	
Appearance and Odor Cylindrical Shape, odorless	

Section 10 – Stability and Reactivity

Stability	Unstable		Conditions to Avoid
	Stable	X	

Incompatibility (Materials to Avoid)

Hazardous Decomposition or Byproducts

Hazardous Polymerization	May Occur		Conditions to Avoid
	Will Not Occur	X	

Section 11 – Toxicological Information

Route(s) of Entry Inhalation? N.A. Skin? N.A. Ingestion? N.A.

Health Hazard (Acute and Chronic) / Toxiclogical information

In case of electrolyte leakage, skin will be itchy when contaminated with electrolyte.

In contact with electrolyte can cause severe irritation and chemical burns.

Inhalation of electrolyte vapors may cause irritation of the upper respiratory tract and lungs.

Section 12 – Ecological Information

N.A.

Section 13 – Disposal Considerations

Dispose of batteries according to government regulations.

Section 14 – Transportation Information

GP NiCd cylindrical cells/batteries are considered to be "dry cell" batteries and are unregulated for purposes of transportation by the U.S. Department of Transportation (DOT), International Civic Aviation Administration (ICAO), International Air Transport Association (IATA) Dangerous Goods Regulations 55th edition, the International Maritime Organization (IMO). (Alkaline batteries are not regulated for transportation as "DANGEROUS GOODS.")

IATA DGR: Special Provision A123: "Example of such batteries are: akali-manganese, zinc carbon. and nickel-cadmium batteries. Any electrical battery…having the potential of a dangerous evolution of heat must be prepared for transport as to prevent (a) a short-circuit (e.g. in the case of batteries, by the effective insulation 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.

EU: As NiCd cylindrical cells/batteries are not explicitly mentioned in RID/ADR, there are no special Dangerous Goods shipment requirements for these products.

USA: 49 CFR § 172.102 Special Provision 130: "For other than dry battery specifically covered by another entry in the § 172.101 Table, "Batteries, dry" are not subject to the requirements of this subchapter when they are securely packaged and offered for transportation in a manner that prevents the dangerous evolution of heat (for example, by the effective insulation of exposed terminals) and protects against short circuits."

Section 15 – Regulatory Information

Special requirement be according to the local regulatories.

Section 16 – Other Information

The data in this Material Safety Data Sheet relates only to the specific material designated herein.

Section 17 – Measures for fire extinction

In case of fire, it is permissible to use any class of extinguishing medium on these batteries or their packing material. Cool exterior of batteries if exposed to fire to prevent rupture.

Fire fighters should wear self-contained breathing apparatus.

For further information please contact:

David Isles

Technical Support Officer - Countermine Division

Minelab Electronics Pty Ltd | 2 Second Ave, Mawson Lakes, SA 5095
T: +61 8 8238 0824 | **F:** +61 8 8238 0890 | **M:** +61 (0)417 850 521 | **E:** david.isles@minelab.com.au