



# Nickel Metal Hydride Battery Pack

This document replaces Bacharach MSDS reference number 0099-0144.

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision Date: 09/18/2017

Version: 1.1

## SECTION 1: IDENTIFICATION

### Product Identifier

**Product Form:** Mixture

**Product Name:** Nickel Metal Hydride Battery Pack

### Intended Use of the Product

**Use of the Substance/Mixture:** Industrial use. For professional use only.

### Name, Address, and Telephone of the Responsible Party

#### **Company**

Bacharach, Inc.

621 Hunt Valley Circle

New Kensington, PA 15068

T 724-334-5760

[msdsr@mybacharach.com](mailto:msdsr@mybacharach.com) - <http://www.mybacharach.com>

### Emergency Telephone Number

**Emergency number** : 800-424-9300 (CHEMTREC)

## SECTION 2: HAZARDS IDENTIFICATION

### Classification of the Substance or Mixture

#### **Classification (GHS-US)**

Within the meaning of the OSHA Hazard Communication Standard [29 CFR 1910.1200] and the Canadian Hazardous Products Act (HPA): this product is considered a manufactured article and is not considered a hazard when used in a manner which is consistent with the labeled directions.

### Label Elements

**GHS-US Labeling** No labeling required

### Other Hazards

**Other Hazards Not Contributing to the Classification:** Substances within this product may be reactive with water, air, form combustible dust concentration in air, can be flammable if released, and cause severe health effects. Thermal decomposition of this product may generate corrosive, and toxic vapors. Avoid extremely high or low temperatures, keep away from incompatible materials. Do not puncture or incinerate container. Within the meaning of the OSHA Hazard Communication Standard [29 CFR 1910.1200] and the Canadian Hazardous Products Act (HPA): this product is considered a manufactured article and is not considered a hazard when used in a manner which is consistent with the labeled directions.

**Unknown Acute Toxicity (GHS-US)** Not available

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### Substances

#### Mixture

Within the meaning of the OSHA Hazard Communication Standard [29 CFR 1910.1200] and the Canadian Hazardous Products Act (HPA): this product is considered a manufactured article and is not considered a hazard when used in a manner which is consistent with the labeled directions.

\*The following ingredients may be contained within the product, but are not available under normal conditions of use. The hazards shown are for the individual ingredients.

Name*	Product identifier	% (w/w)	Classification (GHS-US)
Nickel hydroxide	(CAS No) 12054-48-7	-	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Resp. Sens. 1, H334 Skin Sens. 1, H317 Muta. 2, H341 Carc. 1A, H350 Repr. 1B, H360

# Nickel Metal Hydride Battery Pack

This document replaces Bacharach MSDS reference number 0099-0144.

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

			STOT RE 1, H372 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Lithium hydroxide	(CAS No) 1310-65-2	-	Acute Tox. 3 (Oral), H301 Acute Tox. 4 (Inhalation), H332 Skin Corr. 1B, H314 Eye Dam. 1, H318
Lanthanum	(CAS No) 7439-91-0	-	Flam. Sol. 1, H228
Neodymium	(CAS No) 7440-00-8	-	Flam. Sol. 2, H228 Self-heat. 1, H251
Praseodymium	(CAS No) 7440-10-0	-	Pyr. Sol. 1, H250
Cerium	(CAS No) 7440-45-1	-	Flam. Sol. 1, H228
Potassium hydroxide	(CAS No) 1310-58-3	-	Met. Corr. 1, H290 Acute Tox. 4 (Oral), H302 Skin Corr. 1A, H314 Eye Dam. 1, H318
Zinc oxide	(CAS No) 1314-13-2	-	Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Nickel	(CAS No) 7440-02-0	-	Comb. Dust Skin Sens. 1, H317 Carc. 2, H351 STOT RE 1, H372 Aquatic Acute 1, H400 Aquatic Chronic 3, H412
Zinc	(CAS No) 7440-66-6	-	Comb. Dust Water-react. 1, H260 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Sodium hydroxide	(CAS No) 1310-73-2	-	Met. Corr. 1, H290 Skin Corr. 1A, H314 Eye Dam. 1, H318 Aquatic Acute 3, H402
Iron	(CAS No) 7439-89-6	-	Flam. Sol. 1, H228 Self-heat. 1, H251
Manganese	(CAS No) 7439-96-5	-	Not classified
Cobalt	(CAS No) 7440-48-4	-	Acute Tox. 4 (Oral), H302 Acute Tox. 1 (Inhalation:dust,mist), H330 Eye Irrit. 2A, H319 Resp. Sens. 1B, H334 Skin Sens. 1, H317 Carc. Not classified Repr. 2, H361 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Aluminum	(CAS No) 7429-90-5	-	Flam. Sol. 1, H228 Water-react. 2, H261
Nickel oxide	(CAS No) 1313-99-1	-	Skin Sens. 1, H317 Carc. 1A, H350 STOT RE 1, H372 Aquatic Chronic 4, H413
Cobalt(II) oxide	(CAS No) 1307-96-6	-	Acute Tox. 3 (Oral), H301

# Nickel Metal Hydride Battery Pack

This document replaces Bacharach MSDS reference number 0099-0144.

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

			Resp. Sens. 1B, H334 Skin Sens. 1, H317 Carc. 2, H351 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Cobalt hydroxide	(CAS No) 21041-93-0	-	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Eye Irrit. 2A, H319 Resp. Sens. 1B, H334 Skin Sens. 1, H317 Carc. 1A, H350 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Zinc hydroxide	(CAS No) 20427-58-1	-	Aquatic Acute 1, H400 Aquatic Chronic 2, H411

Full text of H-phrases: see section 16

## SECTION 4: FIRST AID MEASURES

### Description of First Aid Measures

**General:** The following first aid measures apply in case of exposure to the interior battery components, if the battery is damaged and exposure occurs. Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

**Inhalation:** When symptoms occur: go into open air and ventilate suspected area. Obtain medical attention if breathing difficulty persists.

**Skin Contact:** Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Obtain medical attention if irritation develops or persists.

**Eye Contact:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if pain, blinking or redness persist.

**Ingestion:** Rinse mouth. Do not induce vomiting. Seek medical attention.

### Most Important Symptoms and Effects Both Acute and Delayed

**General:** Not hazardous according to OSHA 29 CFR 1910.1200 and the Canadian HPA and is considered an article. Under normal conditions of use there are no physical or health hazards associated with this product. The following symptoms apply in the event an exposure occurs to the materials housed inside the product: May cause cancer. May cause heritable genetic damage. Inhalation may cause allergic respiratory reaction with asthma-like symptoms and difficulty breathing. May cause an allergic skin reaction. Causes serious eye damage. Corrosive. Causes burns. May damage fertility. May damage the unborn child. Causes damage to organs through prolonged or repeated exposure. Toxic if swallowed. May be fatal if inhaled.

**Inhalation:** Exposure to materials housed in battery: Exposure may produce an allergic reaction. May be fatal if inhaled. Inhalation may cause immediate severe irritation progressing quickly to chemical burns.

**Skin Contact:** Exposure to materials housed in battery: Corrosive. Causes burns. May cause an allergic skin reaction.

**Eye Contact:** Exposure to materials housed in battery: Causes serious eye damage.

**Ingestion:** Exposure to materials housed in battery: Toxic if swallowed.

**Chronic Symptoms:** Not available

### Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed to materials encased within the product get medical attention immediately.

## SECTION 5: FIRE-FIGHTING MEASURES

### Extinguishing Media

**Suitable Extinguishing Media:** Metal fire extinction powder. Dry powder. Sand. Water spray. Smother with suitable dry powder.

**Unsuitable Extinguishing Media:** Do not use a heavy water stream. Use of heavy stream of water may spread fire.

### Special Hazards Arising From the Substance or Mixture

**Fire Hazard:** Not considered flammable but will burn at high temperatures.

**Explosion Hazard:** Product is not explosive, however in contact with incompatibilities may release explosive hydrogen gas.

# Nickel Metal Hydride Battery Pack

This document replaces Bacharach MSDS reference number 0099-0144.

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

**Reactivity:** Substances within this product may be reactive with water, air, form combustible dust concentration in air, can be flammable if released, and cause severe health effects. Thermal decomposition of this product may generate corrosive, and toxic vapors. Avoid extremely high or low temperatures, keep away from incompatible materials.

### Advice for Firefighters

**Precautionary Measures Fire:** Exercise caution when fighting any chemical fire.

**Firefighting Instructions:** Use water spray or fog for cooling exposed containers.

**Protection During Firefighting:** Do not enter fire area without proper protective equipment, including respiratory protection.

**Hazardous Combustion Products:** Toxic fumes are released. May release flammable gases. Corrosive vapors. Highly reactive vapors. Metal oxides.

**Other information:** Do not allow run-off from fire fighting to enter drains or water courses.

### Reference to Other Sections

Refer to section 9 for flammability properties.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### Personal Precautions, Protective Equipment and Emergency Procedures

**General Measures:** Product itself under normal conditions of use is not considered hazardous, for materials housed within product: . Avoid all eyes and skin contact and do not breathe vapor and mist. Do not allow product to spread into the environment.

#### For Non-Emergency Personnel

**Protective Equipment:** Use appropriate personal protection equipment (PPE).

**Emergency Procedures:** Evacuate unnecessary personnel.

#### For Emergency Personnel

**Protective Equipment:** Equip cleanup crew with proper protection.

**Emergency Procedures:** Ventilate area.

### Environmental Precautions

Prevent entry to sewers and public waters. Avoid release to the environment.

### Methods and Material for Containment and Cleaning Up

**For Containment:** Stop leak without risks if possible.

**Methods for Cleaning Up:** Clear up spills immediately and dispose of waste safely. For product itself take up mechanically, for inner materials in the event of release from damage neutralize, and absorb material with inert material. Stop leak if possible to do so without risk. Do not allow to spread into the environment. Contact competent authority after a spill, and follow local/national regulations.

### Reference to Other Sections

See heading 8, Exposure Controls and Personal Protection.

## SECTION 7: HANDLING AND STORAGE

### Precautions for Safe Handling

**Additional Hazards When Processed:** Do not open or damage enclosure, or battery cell as this could cause a potential exposure and release of hazardous materials. Under normal conditions of use this product is considered an article and exposure to the ingredients contained within this product is unlikely. Substances within this product may be reactive with water, air, form combustible dust concentration in air, can be flammable if released, and cause severe health effects. Thermal decomposition of this product may generate corrosive, and toxic vapors. Avoid extremely high or low temperatures, keep away from incompatible materials. Do not puncture or incinerate container. Do not expose to heat, or ignition sources as this could cause an explosion. Avoid short circuiting the cell. Charge batteries that are rechargeable only with their specified charger.

**Hygiene Measures:** Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work.

### Conditions for Safe Storage, Including Any Incompatibilities

**Technical Measures:** Comply with applicable regulations.

**Storage Conditions:** Keep container tightly closed. Store in original container. Store in a dry place. Keep/Store away from extremely high or low temperatures, direct sunlight, heat, ignition sources, incompatible materials.

**Incompatible Materials:** Strong acids. Strong bases. Strong oxidizers. Water. Moisture.

### Specific End Use(s)

Industrial use. For professional use only.

# Nickel Metal Hydride Battery Pack

This document replaces Bacharach MSDS reference number 0099-0144.

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

The following ingredients may be contained within the product, but are not available under normal conditions of use. This product is considered a manufactured article and not hazardous.

#### Control Parameters

<b>Lithium hydroxide (1310-65-2)</b>		
British Columbia	OEL Ceiling (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
Ontario	OEL STEL (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup> (anhydrous)
<b>Potassium hydroxide (1310-58-3)</b>		
USA ACGIH	ACGIH Ceiling (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
USA NIOSH	NIOSH REL (ceiling) (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Alberta	OEL Ceiling (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
British Columbia	OEL Ceiling (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Manitoba	OEL Ceiling (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
New Brunswick	OEL Ceiling (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Newfoundland & Labrador	OEL Ceiling (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Nova Scotia	OEL Ceiling (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Nunavut	OEL Ceiling (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Northwest Territories	OEL Ceiling (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Ontario	OEL Ceiling (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Prince Edward Island	OEL Ceiling (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Québec	PLAFOND (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Saskatchewan	OEL Ceiling (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Yukon	OEL Ceiling (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
<b>Zinc oxide (1314-13-2)</b>		
Mexico	OEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Mexico	OEL STEL (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
USA ACGIH	ACGIH STEL (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup>
USA NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup>
USA NIOSH	NIOSH REL (STEL) (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
USA NIOSH	NIOSH REL (ceiling) (mg/m <sup>3</sup> )	15 mg/m <sup>3</sup>
USA IDLH	US IDLH (mg/m <sup>3</sup> )	500 mg/m <sup>3</sup>
Alberta	OEL STEL (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Alberta	OEL TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
British Columbia	OEL STEL (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
British Columbia	OEL TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Manitoba	OEL STEL (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Manitoba	OEL TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
New Brunswick	OEL STEL (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
New Brunswick	OEL TWA (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup>
Newfoundland & Labrador	OEL STEL (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Newfoundland & Labrador	OEL TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Nova Scotia	OEL STEL (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Nova Scotia	OEL TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Nunavut	OEL STEL (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Nunavut	OEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (total mass)
Northwest Territories	OEL STEL (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Northwest Territories	OEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (total mass)

# Nickel Metal Hydride Battery Pack

This document replaces Bacharach MSDS reference number 0099-0144.

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Ontario	OEL STEL (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Ontario	OEL TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Prince Edward Island	OEL STEL (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Prince Edward Island	OEL TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Québec	VECD (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Québec	VEMP (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup>
Saskatchewan	OEL STEL (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Saskatchewan	OEL TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Yukon	OEL STEL (mg/m <sup>3</sup> )	20 mg/m <sup>3</sup>
Yukon	OEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>

### Nickel (7440-02-0)

Mexico	OEL TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	1.5 mg/m <sup>3</sup>
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
USA NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	0.015 mg/m <sup>3</sup>
USA IDLH	US IDLH (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Alberta	OEL TWA (mg/m <sup>3</sup> )	1.5 mg/m <sup>3</sup>
British Columbia	OEL TWA (mg/m <sup>3</sup> )	0.05 mg/m <sup>3</sup>
Manitoba	OEL TWA (mg/m <sup>3</sup> )	1.5 mg/m <sup>3</sup>
New Brunswick	OEL TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
Newfoundland & Labrador	OEL TWA (mg/m <sup>3</sup> )	1.5 mg/m <sup>3</sup>
Nova Scotia	OEL TWA (mg/m <sup>3</sup> )	1.5 mg/m <sup>3</sup>
Nunavut	OEL STEL (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Nunavut	OEL TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
Northwest Territories	OEL STEL (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Northwest Territories	OEL TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
Ontario	OEL TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
Prince Edward Island	OEL TWA (mg/m <sup>3</sup> )	1.5 mg/m <sup>3</sup>
Québec	VEMP (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
Saskatchewan	OEL STEL (mg/m <sup>3</sup> )	3 mg/m <sup>3</sup>
Saskatchewan	OEL TWA (mg/m <sup>3</sup> )	1.5 mg/m <sup>3</sup>
Yukon	OEL STEL (mg/m <sup>3</sup> )	3 mg/m <sup>3</sup>
Yukon	OEL TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>

### Sodium hydroxide (1310-73-2)

Mexico	OEL Ceiling (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
USA ACGIH	ACGIH Ceiling (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
USA NIOSH	NIOSH REL (ceiling) (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
USA IDLH	US IDLH (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Alberta	OEL Ceiling (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
British Columbia	OEL Ceiling (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Manitoba	OEL Ceiling (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
New Brunswick	OEL Ceiling (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Newfoundland & Labrador	OEL Ceiling (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Nova Scotia	OEL Ceiling (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Nunavut	OEL Ceiling (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Northwest Territories	OEL Ceiling (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Ontario	OEL Ceiling (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Prince Edward Island	OEL Ceiling (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Québec	PLAFOND (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>

# Nickel Metal Hydride Battery Pack

This document replaces Bacharach MSDS reference number 0099-0144.

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Saskatchewan	OEL Ceiling (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Yukon	OEL Ceiling (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
<b>Manganese (7439-96-5)</b>		
Mexico	OEL TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
Mexico	OEL STEL (mg/m <sup>3</sup> )	3 mg/m <sup>3</sup>
USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup>
USA OSHA	OSHA PEL (Ceiling) (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup>
USA NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
USA NIOSH	NIOSH REL (STEL) (mg/m <sup>3</sup> )	3 mg/m <sup>3</sup>
USA IDLH	US IDLH (mg/m <sup>3</sup> )	500 mg/m <sup>3</sup>
Alberta	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup>
British Columbia	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup>
Manitoba	OEL TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup>
New Brunswick	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup>
Newfoundland & Labrador	OEL TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup>
Nova Scotia	OEL TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup>
Nunavut	OEL Ceiling (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup>
Nunavut	OEL STEL (mg/m <sup>3</sup> )	3 mg/m <sup>3</sup>
Nunavut	OEL TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
Northwest Territories	OEL Ceiling (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup>
Northwest Territories	OEL STEL (mg/m <sup>3</sup> )	3 mg/m <sup>3</sup>
Northwest Territories	OEL TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
Ontario	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup>
Prince Edward Island	OEL TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup>
Québec	VEMP (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup>
Saskatchewan	OEL STEL (mg/m <sup>3</sup> )	0.6 mg/m <sup>3</sup>
Saskatchewan	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup>
Yukon	OEL Ceiling (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup>
<b>Cobalt (7440-48-4)</b>		
Mexico	OEL TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup>
USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	0.02 mg/m <sup>3</sup>
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup>
USA NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	0.05 mg/m <sup>3</sup>
USA IDLH	US IDLH (mg/m <sup>3</sup> )	20 mg/m <sup>3</sup>
Alberta	OEL TWA (mg/m <sup>3</sup> )	0.02 mg/m <sup>3</sup>
British Columbia	OEL TWA (mg/m <sup>3</sup> )	0.02 mg/m <sup>3</sup>
Manitoba	OEL TWA (mg/m <sup>3</sup> )	0.02 mg/m <sup>3</sup>
New Brunswick	OEL TWA (mg/m <sup>3</sup> )	0.02 mg/m <sup>3</sup>
Newfoundland & Labrador	OEL TWA (mg/m <sup>3</sup> )	0.02 mg/m <sup>3</sup>
Nova Scotia	OEL TWA (mg/m <sup>3</sup> )	0.02 mg/m <sup>3</sup>
Nunavut	OEL STEL (mg/m <sup>3</sup> )	0.3 mg/m <sup>3</sup>
Nunavut	OEL TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup> (metal)
Northwest Territories	OEL STEL (mg/m <sup>3</sup> )	0.3 mg/m <sup>3</sup>
Northwest Territories	OEL TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup>
Ontario	OEL TWA (mg/m <sup>3</sup> )	0.02 mg/m <sup>3</sup>
Prince Edward Island	OEL TWA (mg/m <sup>3</sup> )	0.02 mg/m <sup>3</sup>
Québec	VEMP (mg/m <sup>3</sup> )	0.02 mg/m <sup>3</sup>
Saskatchewan	OEL STEL (mg/m <sup>3</sup> )	0.06 mg/m <sup>3</sup>
Saskatchewan	OEL TWA (mg/m <sup>3</sup> )	0.02 mg/m <sup>3</sup>
Yukon	OEL STEL (mg/m <sup>3</sup> )	0.15 mg/m <sup>3</sup>

# Nickel Metal Hydride Battery Pack

This document replaces Bacharach MSDS reference number 0099-0144.

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Yukon	OEL TWA (mg/m <sup>3</sup> )	0.05 mg/m <sup>3</sup>
<b>Aluminum (7429-90-5)</b>		
Mexico	OEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup>
USA NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup>
Alberta	OEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
British Columbia	OEL TWA (mg/m <sup>3</sup> )	1.0 mg/m <sup>3</sup>
Manitoba	OEL TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
New Brunswick	OEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Newfoundland & Labrador	OEL TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
Nova Scotia	OEL TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
Nunavut	OEL STEL (mg/m <sup>3</sup> )	20 mg/m <sup>3</sup>
Nunavut	OEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Northwest Territories	OEL STEL (mg/m <sup>3</sup> )	20 mg/m <sup>3</sup>
Northwest Territories	OEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Ontario	OEL TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
Prince Edward Island	OEL TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
Québec	VEMP (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Saskatchewan	OEL STEL (mg/m <sup>3</sup> )	20 mg/m <sup>3</sup>
Saskatchewan	OEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>

### Exposure Controls

**Appropriate Engineering Controls:** Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed.

**Personal Protective Equipment:** Not required under normal conditions of use, when handling damaged batteries: Gloves, Protective clothing, Protective goggles, Insufficient ventilation: wear respiratory protection.

**Materials for Protective Clothing:** Not required under normal conditions of use, when handling damaged batteries: Chemically resistant materials and fabrics. Corrosionproof clothing.

**Hand Protection:** Not required under normal conditions of use, when handling damaged batteries: Wear chemically resistant protective gloves.

**Eye Protection:** Not required under normal conditions of use, when handling damaged batteries: Chemical goggles or safety glasses.

**Skin and Body Protection:** Not required under normal conditions of use, when handling damaged batteries: Wear suitable protective clothing.

**Respiratory Protection:** Not required under normal conditions of use, when handling damaged batteries: Use a NIOSH-approved respirator or self-contained breathing apparatus whenever exposure may exceed established Occupational Exposure Limits.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### Information on Basic Physical and Chemical Properties

Physical State	: Solid
Appearance	: Not available
Odor	: Not available
Odor Threshold	: Not available
pH	: Not available
Relative Evaporation Rate (butylacetate=1)	: Not available
Melting Point	: Not available
Freezing Point	: Not available
Boiling Point	: Not available
Flash Point	: Not available
Auto-ignition Temperature	: Not available
Decomposition Temperature	: Not available



# Nickel Metal Hydride Battery Pack

This document replaces Bacharach MSDS reference number 0099-0144.

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

<b>Flammability (solid, gas)</b>	: Not available
<b>Lower Flammable Limit</b>	: Not available
<b>Upper Flammable Limit</b>	: Not available
<b>Vapor Pressure</b>	: Not available
<b>Relative Vapor Density at 20 °C</b>	: Not available
<b>Relative Density</b>	: Not available
<b>Specific Gravity</b>	: Not available
<b>Solubility</b>	: Not available
<b>Partition coefficient: n-octanol/water</b>	: Not available
<b>Viscosity</b>	: Not available
<b>Explosion Data – Sensitivity to Mechanical Impact</b>	: Not expected to present an explosion hazard due to mechanical impact.
<b>Explosion Data – Sensitivity to Static Discharge</b>	: Not expected to present an explosion hazard due to static discharge.

## SECTION 10: STABILITY AND REACTIVITY

**Reactivity:** Substances within this product may be reactive with water, air, form combustible dust concentration in air, can be flammable if released, and cause severe health effects. Thermal decomposition of this product may generate corrosive, and toxic vapors. Avoid extremely high or low temperatures, keep away from incompatible materials.

**Chemical Stability:** Stable under recommended handling and storage conditions.

**Possibility of Hazardous Reactions:** Hazardous polymerization will not occur.

**Conditions to Avoid:** Extremely high or low temperatures. Direct sunlight. Incompatible materials. Ignition sources. Damaging, puncturing, or opening the battery cell. Do not connect positive terminal to negative terminal with electrical wire or chain. Do not use unauthorized charger or charging method. Do not deconstruct or disassemble battery or solder battery.

**Incompatible Materials:** Strong acids, strong bases, strong oxidizers. Water. Moisture.

**Hazardous Decomposition Products:** Thermal decomposition generates : Toxic vapors. May release flammable gases. Corrosive vapors. Highly reactive vapors. Metal oxides.

## SECTION 11: TOXICOLOGICAL INFORMATION

### Information on Toxicological Effects - Product

**Acute Toxicity:** Not classified

**LD50 and LC50 Data:** Not available

**Skin Corrosion/Irritation:** Not classified.

**Serious Eye Damage/Irritation:** Not classified.

**Respiratory or Skin Sensitization:** Not classified

**Germ Cell Mutagenicity:** Not classified

**Teratogenicity:** Not available

**Carcinogenicity:** Not classified

**Specific Target Organ Toxicity (Repeated Exposure):** Not classified

**Reproductive Toxicity:** Not classified

**Specific Target Organ Toxicity (Single Exposure):** Not classified

**Aspiration Hazard:** Not classified

**Symptoms/Injuries After Inhalation:** Exposure to materials housed in battery: Exposure may produce an allergic reaction. May be fatal if inhaled. Inhalation may cause immediate severe irritation progressing quickly to chemical burns.

**Symptoms/Injuries After Skin Contact:** Exposure to materials housed in battery: Corrosive. Causes burns. May cause an allergic skin reaction.

**Symptoms/Injuries After Eye Contact:** Exposure to materials housed in battery: Causes serious eye damage.

**Symptoms/Injuries After Ingestion:** Exposure to materials housed in battery: Toxic if swallowed.

### Information on Toxicological Effects - Ingredient(s)

The following ingredients may be contained within the product, but are not available under normal conditions of use. This product is considered a manufactured article and not hazardous.

**LD50 and LC50 Data:**

# Nickel Metal Hydride Battery Pack

This document replaces Bacharach MSDS reference number 0099-0144.

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

<b>Nickel hydroxide (12054-48-7)</b>	
LC50 Inhalation Rat (mg/l)	1200 mg/m <sup>3</sup> (Exposure time: 4 h)
<b>Lithium hydroxide (1310-65-2)</b>	
LD50 Oral Rat	120 mg/kg
LC50 Inhalation Rat (mg/l)	960 mg/m <sup>3</sup> (Exposure time: 4 h)
<b>Potassium hydroxide (1310-58-3)</b>	
LD50 Oral Rat	214 mg/kg
ATE (oral)	333.000 mg/kg body weight
<b>Zinc oxide (1314-13-2)</b>	
LD50 Oral Rat	> 5000 mg/kg
ATE (dust, mist)	5.800 mg/l/4h
<b>Nickel (7440-02-0)</b>	
LD50 Oral Rat	> 9000 mg/kg
<b>Manganese (7439-96-5)</b>	
ATE (oral)	9000.000 mg/kg body weight
<b>Cobalt (7440-48-4)</b>	
LD50 Oral Rat	6170 mg/kg
LC50 Inhalation Rat (mg/l)	> 10 mg/l (Exposure time: 1 h)
ATE (oral)	6170.000 mg/kg body weight
<b>Nickel oxide (1313-99-1)</b>	
LD50 Oral Rat	> 5000 mg/kg
<b>Nickel hydroxide (12054-48-7)</b>	
IARC Group	1
<b>Nickel (7440-02-0)</b>	
IARC Group	2B
National Toxicity Program (NTP) Status	Reasonably anticipated to be Human Carcinogen.
<b>Cobalt (7440-48-4)</b>	
IARC Group	2B
<b>Nickel oxide (1313-99-1)</b>	
IARC Group	1
National Toxicity Program (NTP) Status	Evidence of Carcinogenicity.
<b>Cobalt(II) oxide (1307-96-6)</b>	
IARC Group	2B
<b>Cobalt hydroxide (21041-93-0)</b>	
IARC Group	2B

## SECTION 12: ECOLOGICAL INFORMATION

### Toxicity

**Ecology - General:** The product itself is not considered hazardous and is considered and article according to 29 CFR 1910.1200 and the Candian HPA and is considered a manufactured article. The ecotoxicological information applies to the materials encased within the product. Very toxic to aquatic life with long lasting effects.

<b>Zinc oxide (1314-13-2)</b>	
LC50 Fish 1	780 µg/l Pimephales promelas
NOEC chronic fish	0.026 mg/l Jordanella floridae
<b>Nickel (7440-02-0)</b>	
LC50 Fish 1	100 mg/l (Exposure time: 96 h - Species: Brachydanio rerio)
EC50 Daphnia 1	100 mg/l (Exposure time: 48 h - Species: Daphnia magna)

# Nickel Metal Hydride Battery Pack

This document replaces Bacharach MSDS reference number 0099-0144.

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

EC50 Other Aquatic Organisms 1	0.18 mg/l (Exposure time: 72 h - Species: Pseudokirchneriella subcapitata)
LC 50 Fish 2	1.3 mg/l (Exposure time: 96 h - Species: Cyprinus carpio [semi-static])
EC50 Daphnia 2	1 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
EC50 Other Aquatic Organisms 2	0.174 (0.174 - 0.311) mg/l (Exposure time: 96 h - Species: Pseudokirchneriella subcapitata [static])

### Zinc (7440-66-6)

LC50 Fish 1	2.16 - 3.05 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 Daphnia 1	0.139 - 0.908 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
EC50 Other Aquatic Organisms 1	0.11 - 0.271 mg/l (Exposure time: 96 h - Species: Pseudokirchneriella subcapitata [static])
LC 50 Fish 2	0.211 - 0.269 mg/l (Exposure time: 96 h - Species: Pimephales promelas [semi-static])
EC50 Other Aquatic Organisms 2	0.09 - 0.125 mg/l (Exposure time: 72 h - Species: Pseudokirchneriella subcapitata [static])

### Sodium hydroxide (1310-73-2)

LC50 Fish 1	40 mg/l
-------------	---------

### Cobalt (7440-48-4)

LC50 Fish 1	100 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [static])
-------------	--

### Nickel oxide (1313-99-1)

LC50 Fish 1	> 100 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [static])
EC50 Daphnia 1	> 100 mg/l (Exposure time: 48 h - Species: Daphnia magna)
EC50 Other Aquatic Organisms 1	> 127.3 mg/l (Exposure time: 72 h - Species: Pseudokirchneriella subcapitata)

### Persistence and Degradability

<b>Nickel Metal Hydride Battery Pack</b>	
Persistence and Degradability	May cause long-term adverse effects in the environment.

### Bioaccumulative Potential

<b>Potassium hydroxide (1310-58-3)</b>	
Log Pow	0.65
<b>Cobalt (7440-48-4)</b>	
BCF fish 1	(no bioaccumulation)

### Mobility in Soil

Not available

### Other Adverse Effects

**Other Information:** Avoid release to the environment.

## SECTION 13: DISPOSAL CONSIDERATIONS

**Waste Disposal Recommendations:** Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.

**Ecology – Waste Materials:** The materials contained within this product are hazardous to the environment, do not release into the environment.

## SECTION 14: TRANSPORT INFORMATION

\*When shipping follow all applicable regulations and special provisions for each transport agency. The following classifications apply when shipping meets the following special provisions. Classifications may differ from those below depending on the quantity of batteries and how they are packaged, among other factors.

**14.1 In Accordance with DOT\*** Not regulated (considered dry batteries special provision 130 and 340 “Nickel Metal Hydride cylindrical cells/batteries are not subject to requirements of this subchapter except for the following – “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 material (e.g., metal) in the packaging...”)

**14.2 In Accordance with IMDG\*** UN 3496 (Special provision 963 “nickel-metal hydride cells or batteries shall be securely packed and protected from short-circuit. They are not subject to other provisions of this Code provided that they are loaded in a cargo transport unit in a total quantity of less than 100Kg gross mass. When loaded in a cargo transport unit in a total quantity of 100Kg

# Nickel Metal Hydride Battery Pack

This document replaces Bacharach MSDS reference number 0099-0144.

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

gross mass or more, they are not subject to other provisions of this Code except those of 5.4.1, 5.4.3, and column (16) of the Dangerous Goods list in Chapter 3.2.”)

**14.3 In Accordance with IATA\*** Not regulated (considered dry batteries special provision A123 “Examples of such batteries are: alkali-manganese, zinc-carbon, nickel-metal hydride, 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”)

**14.4 In Accordance with TDG\*** Not regulated

## SECTION 15: REGULATORY INFORMATION

### US Federal Regulations

The product itself is not considered hazardous and is a manufactured article according to 29 CFR 1910.1200 and the Canadian HPA the following information is for the ingredients contained within this material that are not available under normal conditions of use.

<b>Nickel hydroxide (12054-48-7)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>Lithium hydroxide (1310-65-2)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>Lanthanum (7439-91-0)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>Neodymium (7440-00-8)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>Praseodymium (7440-10-0)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>Cerium (7440-45-1)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>Potassium hydroxide (1310-58-3)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>Zinc oxide (1314-13-2)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>Nickel (7440-02-0)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Listed on SARA Section 313 (Specific toxic chemical listings)	
<b>RQ (Reportable Quantity, Section 304 of EPA's List of Lists):</b>	100 lb (only applicable if particles are < 100 µm)
<b>SARA Section 313 - Emission Reporting</b>	0.1 %
<b>Zinc (7440-66-6)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Listed on SARA Section 313 (Specific toxic chemical listings)	
<b>SARA Section 313 - Emission Reporting</b>	1.0 % (dust or fume only)
<b>Sodium hydroxide (1310-73-2)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>Iron (7439-89-6)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>Manganese (7439-96-5)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Listed on SARA Section 313 (Specific toxic chemical listings)	
<b>SARA Section 313 - Emission Reporting</b>	1.0 %

# Nickel Metal Hydride Battery Pack

This document replaces Bacharach MSDS reference number 0099-0144.

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

<b>Cobalt (7440-48-4)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Listed on SARA Section 313 (Specific toxic chemical listings)	
<b>SARA Section 313 - Emission Reporting</b>	0.1 %
<b>Aluminum (7429-90-5)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Listed on SARA Section 313 (Specific toxic chemical listings)	
<b>SARA Section 313 - Emission Reporting</b>	1.0 % (dust or fume only)
<b>Nickel oxide (1313-99-1)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>Cobalt(II) oxide (1307-96-6)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>Cobalt hydroxide (21041-93-0)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>Zinc hydroxide (20427-58-1)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>US State Regulations</b>	
The product itself is not considered hazardous and is a manufactured article according to 29 CFR 1910.1200 and the Canadian HPA the following information is for the ingredients contained within this material that are not available under normal conditions of use.	
<b>Nickel hydroxide (12054-48-7)</b>	
<b>U.S. - California - Proposition 65 - Carcinogens List</b>	WARNING: This product contains chemicals known to the State of California to cause cancer.
<b>Nickel (7440-02-0)</b>	
<b>U.S. - California - Proposition 65 - Carcinogens List</b>	WARNING: This product contains chemicals known to the State of California to cause cancer.
<b>Cobalt (7440-48-4)</b>	
<b>U.S. - California - Proposition 65 - Carcinogens List</b>	WARNING: This product contains chemicals known to the State of California to cause cancer.
<b>Nickel oxide (1313-99-1)</b>	
<b>U.S. - California - Proposition 65 - Carcinogens List</b>	WARNING: This product contains chemicals known to the State of California to cause cancer.
<b>Cobalt(II) oxide (1307-96-6)</b>	
<b>U.S. - California - Proposition 65 - Carcinogens List</b>	WARNING: This product contains chemicals known to the State of California to cause cancer.
<b>Nickel hydroxide (12054-48-7)</b>	
U.S. - California - SCAQMD - Toxic Air Contaminants - Carcinogens U.S. - California - SCAQMD - Toxic Air Contaminants - Non-Cancer Acute U.S. - California - SCAQMD - Toxic Air Contaminants - Non-Cancer Chronic U.S. - California - SDAPCD - Toxic Air Contaminants - Carcinogenic Impacts Must Be Calculated U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities U.S. - Louisiana - Reportable Quantity List for Pollutants U.S. - Maine - Chemicals of High Concern U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 1 U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 2 U.S. - Massachusetts - Oil & Hazardous Material List - Reportable Quantity U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 1 U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 2 U.S. - Massachusetts - Right To Know List	

# Nickel Metal Hydride Battery Pack

This document replaces Bacharach MSDS reference number 0099-0144.

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

U.S. - Massachusetts - Toxics Use Reduction Act  
U.S. - Michigan - Polluting Materials List  
U.S. - Minnesota - Chemicals of High Concern  
U.S. - New Jersey - Discharge Prevention - List of Hazardous Substances  
U.S. - New Jersey - Right to Know Hazardous Substance List  
U.S. - New Jersey - Special Health Hazards Substances List  
U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances  
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List  
U.S. - Pennsylvania - RTK (Right to Know) List

### Lithium hydroxide (1310-65-2)

U.S. - Minnesota - Hazardous Substance List  
U.S. - Texas - Effects Screening Levels - Long Term  
U.S. - Texas - Effects Screening Levels - Short Term

### Cerium (7440-45-1)

U.S. - New Jersey - Right to Know Hazardous Substance List  
U.S. - New Jersey - Special Health Hazards Substances List

### Potassium hydroxide (1310-58-3)

U.S. - Connecticut - Hazardous Air Pollutants - HLVs (30 min)  
U.S. - Connecticut - Hazardous Air Pollutants - HLVs (8 hr)  
U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities  
U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations  
U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Emission Levels (ELs)  
U.S. - Louisiana - Reportable Quantity List for Pollutants  
U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 1  
U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 2  
U.S. - Massachusetts - Oil & Hazardous Material List - Reportable Quantity  
U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 1  
U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 2  
U.S. - Massachusetts - Right To Know List  
U.S. - Massachusetts - Toxics Use Reduction Act  
U.S. - Michigan - Occupational Exposure Limits - Ceilings  
U.S. - Michigan - Polluting Materials List  
U.S. - Minnesota - Hazardous Substance List  
U.S. - Minnesota - Permissible Exposure Limits - Ceilings  
U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - 24-Hour  
U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - Annual  
U.S. - New Jersey - Discharge Prevention - List of Hazardous Substances  
U.S. - New Jersey - Right to Know Hazardous Substance List  
U.S. - New Jersey - Special Health Hazards Substances List  
U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances  
U.S. - North Dakota - Air Pollutants - Guideline Concentrations - 1-Hour  
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List  
U.S. - Pennsylvania - RTK (Right to Know) List  
U.S. - Tennessee - Occupational Exposure Limits - Ceilings  
U.S. - Texas - Effects Screening Levels - Long Term  
U.S. - Texas - Effects Screening Levels - Short Term  
U.S. - Vermont - Permissible Exposure Limits - Ceilings  
U.S. - Washington - Permissible Exposure Limits - Ceilings  
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights 25 Feet to Less Than 40 Feet  
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights 40 Feet to Less Than 75 Feet  
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights 75 Feet or Greater

# Nickel Metal Hydride Battery Pack

This document replaces Bacharach MSDS reference number 0099-0144.

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights Less Than 25 Feet

### Zinc oxide (1314-13-2)

U.S. - Connecticut - Hazardous Air Pollutants - HLVs (30 min)  
U.S. - Connecticut - Hazardous Air Pollutants - HLVs (8 hr)  
U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations  
U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Emission Levels (ELs)  
U.S. - Idaho - Occupational Exposure Limits - TWAs  
U.S. - Massachusetts - Right To Know List  
U.S. - Massachusetts - Toxics Use Reduction Act  
U.S. - Michigan - Occupational Exposure Limits - STELS  
U.S. - Michigan - Occupational Exposure Limits - TWAs  
U.S. - Minnesota - Hazardous Substance List  
U.S. - Minnesota - Permissible Exposure Limits - STELS  
U.S. - Minnesota - Permissible Exposure Limits - TWAs  
U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - 24-Hour  
U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - Annual  
U.S. - New Jersey - Right to Know Hazardous Substance List  
U.S. - New York - Occupational Exposure Limits - TWAs  
U.S. - North Dakota - Air Pollutants - Guideline Concentrations - 1-Hour  
U.S. - North Dakota - Air Pollutants - Guideline Concentrations - 8-Hour  
U.S. - Oregon - Permissible Exposure Limits - TWAs  
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List  
U.S. - Pennsylvania - RTK (Right to Know) List  
U.S. - Tennessee - Occupational Exposure Limits - STELS  
U.S. - Tennessee - Occupational Exposure Limits - TWAs  
U.S. - Texas - Effects Screening Levels - Long Term  
U.S. - Texas - Effects Screening Levels - Short Term  
U.S. - Vermont - Permissible Exposure Limits - STELS  
U.S. - Vermont - Permissible Exposure Limits - TWAs  
U.S. - Washington - Permissible Exposure Limits - STELS  
U.S. - Washington - Permissible Exposure Limits - TWAs

### Nickel (7440-02-0)

U.S. - California - Priority Toxic Pollutants - Freshwater Criteria  
U.S. - California - Priority Toxic Pollutants - Human Health Criteria  
U.S. - California - Priority Toxic Pollutants - Saltwater Criteria  
U.S. - California - SCAQMD - Toxic Air Contaminants - Carcinogens  
U.S. - California - SCAQMD - Toxic Air Contaminants - Non-Cancer Acute  
U.S. - California - SCAQMD - Toxic Air Contaminants - Non-Cancer Chronic  
U.S. - California - SDAPCD - Toxic Air Contaminants - Carcinogenic Impacts Must Be Calculated  
U.S. - California - Toxic Air Contaminant List (AB 1807, AB 2728)  
U.S. - Connecticut - Drinking Water Quality Standards - Maximum Contaminant Levels  
U.S. - Connecticut - Hazardous Air Pollutants - HLVs (30 min)  
U.S. - Connecticut - Hazardous Air Pollutants - HLVs (8 hr)  
U.S. - Connecticut - Water Quality Standards - Acute Freshwater Aquatic Life Criteria  
U.S. - Connecticut - Water Quality Standards - Acute Saltwater Aquatic Life Criteria  
U.S. - Connecticut - Water Quality Standards - Chronic Freshwater Aquatic Life Criteria  
U.S. - Connecticut - Water Quality Standards - Chronic Saltwater Aquatic Life Criteria  
U.S. - Connecticut - Water Quality Standards - Consumption of Organisms Only  
U.S. - Connecticut - Water Quality Standards - Consumption of Water and Organisms  
U.S. - Connecticut - Water Quality Standards - Health Designations  
U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities  
U.S. - Florida - Drinking Water Standards - Inorganic Contaminants - Maximum Contaminant Levels (MCLs)

# Nickel Metal Hydride Battery Pack

This document replaces Bacharach MSDS reference number 0099-0144.

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

U.S. - Georgia - Drinking Water - Maximum Contaminant Levels (MCLs)  
U.S. - Idaho - Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations  
U.S. - Idaho - Carcinogenic Toxic Air Pollutants - Emission Levels (ELs)  
U.S. - Idaho - Occupational Exposure Limits - TWAs  
U.S. - Illinois - Toxic Air Contaminant Carcinogens  
U.S. - Illinois - Toxic Air Contaminants  
U.S. - Louisiana - Reportable Quantity List for Pollutants  
U.S. - Maine - Air Pollutants - Hazardous Air Pollutants  
U.S. - Maine - Chemicals of High Concern  
U.S. - Maryland - Surface Water Quality Standards - Acute Freshwater Aquatic Life  
U.S. - Maryland - Surface Water Quality Standards - Acute Saltwater Aquatic Life Criteria  
U.S. - Maryland - Surface Water Quality Standards - Chronic Freshwater Aquatic Life  
U.S. - Maryland - Surface Water Quality Standards - Chronic Saltwater Aquatic Life Criteria  
U.S. - Maryland - Surface Water Quality Standards - Consumption of Organisms Only  
U.S. - Maryland - Surface Water Quality Standards - Consumption of Water and Organisms  
U.S. - Massachusetts - Allowable Ambient Limits (AALs)  
U.S. - Massachusetts - Allowable Threshold Concentrations (ATCs)  
U.S. - Massachusetts - Drinking Water Guidelines  
U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 1  
U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 2  
U.S. - Massachusetts - Oil & Hazardous Material List - Reportable Quantity  
U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 1  
U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 2  
U.S. - Massachusetts - Right To Know List  
U.S. - Massachusetts - Threshold Effects Exposure Limits (TELEs)  
U.S. - Massachusetts - Toxics Use Reduction Act  
U.S. - Michigan - Occupational Exposure Limits - TWAs  
U.S. - Michigan - Polluting Materials List  
U.S. - Minnesota - Chemicals of High Concern  
U.S. - Minnesota - Hazardous Substance List  
U.S. - Minnesota - Permissible Exposure Limits - TWAs  
U.S. - Nebraska - Drinking Water - Maximum Contaminant Levels (MCLs)  
U.S. - New Hampshire - Prohibited Volatile Organic Compounds  
U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - 24-Hour  
U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - Annual  
U.S. - New Jersey - Discharge Prevention - List of Hazardous Substances  
U.S. - New Jersey - Environmental Hazardous Substances List  
U.S. - New Jersey - Right to Know Hazardous Substance List  
U.S. - New Jersey - Special Health Hazards Substances List  
U.S. - New Mexico - Water Quality - Standards for Ground Water of 10,000 mg/L TDS Concentration or Less  
U.S. - New York - Occupational Exposure Limits - TWAs  
U.S. - New York - Priority Chemical Avoidance List  
U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances  
U.S. - North Carolina - Control of Toxic Air Pollutants  
U.S. - North Dakota - Air Pollutants - Guideline Concentrations - 8-Hour  
U.S. - North Dakota - Water Quality Standards - Aquatic Life Acute Value for Classes I, IA, II, III  
U.S. - North Dakota - Water Quality Standards - Aquatic Life Chronic Value for Classes I, IA, II, III  
U.S. - North Dakota - Water Quality Standards - Human Health Value for Class III  
U.S. - North Dakota - Water Quality Standards - Human Health Value for Classes I, IA, II  
U.S. - Oregon - Permissible Exposure Limits - TWAs  
U.S. - Pennsylvania - Beneficial Use of Sewage Sludge by Land Application - Pollutant Ceiling Limits  
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List



# Nickel Metal Hydride Battery Pack

This document replaces Bacharach MSDS reference number 0099-0144.

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances  
U.S. - Pennsylvania - RTK (Right to Know) List  
U.S. - Rhode Island - Air Toxics - Acceptable Ambient Levels - 1-Hour  
U.S. - Rhode Island - Air Toxics - Acceptable Ambient Levels - 24-Hour  
U.S. - Rhode Island - Air Toxics - Acceptable Ambient Levels - Annual  
U.S. - Rhode Island - Water Quality Standards - Acute Freshwater Aquatic Life Criteria  
U.S. - Rhode Island - Water Quality Standards - Acute Saltwater Aquatic Life Criteria  
U.S. - Rhode Island - Water Quality Standards - Chronic Freshwater Aquatic Life Criteria  
U.S. - Rhode Island - Water Quality Standards - Chronic Saltwater Aquatic Life Criteria  
U.S. - Rhode Island - Water Quality Standards - Human Health Criteria for Consumption of Aquatic Organisms Only  
U.S. - Rhode Island - Water Quality Standards - Human Health Criteria for Consumption of Water and Aquatic Organisms  
U.S. - South Carolina - Toxic Air Pollutants - Maximum Allowable Concentrations  
U.S. - South Carolina - Toxic Air Pollutants - Pollutant Categories  
U.S. - Tennessee - Occupational Exposure Limits - TWAs  
U.S. - Texas - Effects Screening Levels - Long Term  
U.S. - Texas - Effects Screening Levels - Short Term  
U.S. - Utah - Drinking Water - Maximum Contaminant Levels (MCLs)  
U.S. - Vermont - Hazardous Waste - Hazardous Constituents  
U.S. - Vermont - Permissible Exposure Limits - TWAs  
U.S. - Virginia - Water Quality Standards - Acute Freshwater Aquatic Life  
U.S. - Virginia - Water Quality Standards - Acute Saltwater Aquatic Life  
U.S. - Virginia - Water Quality Standards - Chronic Freshwater Aquatic Life  
U.S. - Virginia - Water Quality Standards - Chronic Saltwater Aquatic Life  
U.S. - Virginia - Water Quality Standards - Public Water Supply Effluent Limits  
U.S. - Virginia - Water Quality Standards - Surface Waters Not Used for the Public Water Supply Effluent Limits  
U.S. - Washington - Dangerous Waste - Dangerous Waste Constituents List  
U.S. - Washington - Permissible Exposure Limits - STELs  
U.S. - Washington - Permissible Exposure Limits - TWAs  
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights 25 Feet to Less Than 40 Feet  
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights 40 Feet to Less Than 75 Feet  
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights 75 Feet or Greater  
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights Less Than 25 Feet  
U.S. - Alaska - Water Quality Standards - Acute Aquatic Life Criteria for Fresh Water  
U.S. - Alaska - Water Quality Standards - Chronic Aquatic Life Criteria for Fresh Water  
U.S. - Alaska - Water Quality Standards - Acute Aquatic Life Criteria for Marine Water  
U.S. - Alaska - Water Quality Standards - Chronic Aquatic Life Criteria for Marine Water  
U.S. - Arkansas - Surface Water Quality Standards - Chronic Aquatic Life Criteria  
U.S. - Arkansas - Surface Water Quality Standards - Acute Aquatic Life Criteria

### Zinc (7440-66-6)

U.S. - California - Priority Toxic Pollutants - Freshwater Criteria  
U.S. - California - Priority Toxic Pollutants - Saltwater Criteria  
U.S. - California - Toxic Air Contaminant List (AB 1807, AB 2728)  
U.S. - Colorado - Primary Drinking Water Regulations - Secondary Maximum Contaminant Levels (SMCLs)  
U.S. - Connecticut - Water Quality Standards - Acute Freshwater Aquatic Life Criteria  
U.S. - Connecticut - Water Quality Standards - Acute Saltwater Aquatic Life Criteria  
U.S. - Connecticut - Water Quality Standards - Chronic Freshwater Aquatic Life Criteria  
U.S. - Connecticut - Water Quality Standards - Chronic Saltwater Aquatic Life Criteria  
U.S. - Connecticut - Water Quality Standards - Consumption of Organisms Only  
U.S. - Connecticut - Water Quality Standards - Consumption of Water and Organisms  
U.S. - Connecticut - Water Quality Standards - Health Designations  
U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities  
U.S. - Florida - Drinking Water Standards - Secondary Maximum Contaminant Levels (SMCLs)

# Nickel Metal Hydride Battery Pack

This document replaces Bacharach MSDS reference number 0099-0144.

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

U.S. - Georgia - Drinking Water - Secondary Maximum Contaminant Levels (SMCLs)  
U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations  
U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Emission Levels (ELs)  
U.S. - Louisiana - Reportable Quantity List for Pollutants  
U.S. - Maryland - Surface Water Quality Standards - Acute Freshwater Aquatic Life  
U.S. - Maryland - Surface Water Quality Standards - Acute Saltwater Aquatic Life Criteria  
U.S. - Maryland - Surface Water Quality Standards - Chronic Freshwater Aquatic Life  
U.S. - Maryland - Surface Water Quality Standards - Chronic Saltwater Aquatic Life Criteria  
U.S. - Maryland - Surface Water Quality Standards - Consumption of Organisms Only  
U.S. - Maryland - Surface Water Quality Standards - Consumption of Water and Organisms  
U.S. - Massachusetts - Drinking Water - Secondary Maximum Contaminant Levels (SMCLs)  
U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 1  
U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 2  
U.S. - Massachusetts - Oil & Hazardous Material List - Reportable Quantity  
U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 1  
U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 2  
U.S. - Massachusetts - Right To Know List  
U.S. - Massachusetts - Toxics Use Reduction Act  
U.S. - Michigan - Polluting Materials List  
U.S. - Minnesota - Chemicals of High Concern  
U.S. - Minnesota - Groundwater Health Risk Limits  
U.S. - Missouri - Drinking Water - Secondary Maximum Contaminant Levels (SMCLs)  
U.S. - Nevada - Drinking Water - Secondary Maximum Contaminant Levels (SMCLs)  
U.S. - New Hampshire - Drinking Water - Secondary Maximum Contaminant Levels (SMCLs)  
U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - 24-Hour  
U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - Annual  
U.S. - New Jersey - Discharge Prevention - List of Hazardous Substances  
U.S. - New Jersey - Environmental Hazardous Substances List  
U.S. - New Jersey - Right to Know Hazardous Substance List  
U.S. - New Jersey - Secondary Drinking Water Standards - Recommended Upper Limits (RULs)  
U.S. - New Jersey - Special Health Hazards Substances List  
U.S. - New Jersey - Water Quality - Ground Water Quality Criteria  
U.S. - New Jersey - Water Quality - Practical Quantitation Levels (PQLs)  
U.S. - New Mexico - Water Quality - Standards for Ground Water of 10,000 mg/L TDS Concentration or Less  
U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances  
U.S. - North Dakota - Water Quality Standards - Aquatic Life Acute Value for Classes I, IA, II, III  
U.S. - North Dakota - Water Quality Standards - Aquatic Life Chronic Value for Classes I, IA, II, III  
U.S. - North Dakota - Water Quality Standards - Human Health Value for Class III  
U.S. - North Dakota - Water Quality Standards - Human Health Value for Classes I, IA, II  
U.S. - Pennsylvania - Beneficial Use of Sewage Sludge by Land Application - Pollutant Ceiling Limits  
U.S. - Pennsylvania - Drinking Water - Secondary Maximum Contaminant Levels (SMCLs)  
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List  
U.S. - Pennsylvania - RTK (Right to Know) List  
U.S. - Rhode Island - Air Toxics - Acceptable Ambient Levels - 24-Hour  
U.S. - Rhode Island - Air Toxics - Acceptable Ambient Levels - Annual  
U.S. - Rhode Island - Water Quality Standards - Acute Freshwater Aquatic Life Criteria  
U.S. - Rhode Island - Water Quality Standards - Acute Saltwater Aquatic Life Criteria  
U.S. - Rhode Island - Water Quality Standards - Chronic Freshwater Aquatic Life Criteria  
U.S. - Rhode Island - Water Quality Standards - Chronic Saltwater Aquatic Life Criteria  
U.S. - Rhode Island - Water Quality Standards - Human Health Criteria for Consumption of Aquatic Organisms Only  
U.S. - Rhode Island - Water Quality Standards - Human Health Criteria for Consumption of Water and Aquatic Organisms  
U.S. - South Carolina - Secondary Maximum Contaminant Levels (SMCLs)

# Nickel Metal Hydride Battery Pack

This document replaces Bacharach MSDS reference number 0099-0144.

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

U.S. - Texas - Drinking Water Standards - Secondary Constituent Levels (SCLs)  
U.S. - Texas - Effects Screening Levels - Long Term  
U.S. - Texas - Effects Screening Levels - Short Term  
U.S. - Utah - Drinking Water - Secondary Maximum Contaminant Levels (SMCLs)  
U.S. - Virginia - Water Quality Standards - Acute Freshwater Aquatic Life  
U.S. - Virginia - Water Quality Standards - Acute Saltwater Aquatic Life  
U.S. - Virginia - Water Quality Standards - Chronic Freshwater Aquatic Life  
U.S. - Virginia - Water Quality Standards - Chronic Saltwater Aquatic Life  
U.S. - Virginia - Water Quality Standards - Public Water Supply Effluent Limits  
U.S. - Virginia - Water Quality Standards - Surface Waters Not Used for the Public Water Supply Effluent Limits  
U.S. - Alaska - Water Quality Standards - Acute Aquatic Life Criteria for Fresh Water  
U.S. - Alaska - Water Quality Standards - Chronic Aquatic Life Criteria for Fresh Water  
U.S. - Alaska - Water Quality Standards - Acute Aquatic Life Criteria for Marine Water  
U.S. - Alaska - Water Quality Standards - Chronic Aquatic Life Criteria for Marine Water  
U.S. - Arkansas - Surface Water Quality Standards - Chronic Aquatic Life Criteria  
U.S. - Arkansas - Surface Water Quality Standards - Acute Aquatic Life Criteria

### Sodium hydroxide (1310-73-2)

U.S. - California - SCAQMD - Toxic Air Contaminants - Non-Cancer Acute  
U.S. - California - Toxic Air Contaminant List (AB 1807, AB 2728)  
U.S. - Connecticut - Hazardous Air Pollutants - HLVs (30 min)  
U.S. - Connecticut - Hazardous Air Pollutants - HLVs (8 hr)  
U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities  
U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations  
U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Emission Levels (ELs)  
U.S. - Idaho - Occupational Exposure Limits - TWAs  
U.S. - Louisiana - Reportable Quantity List for Pollutants  
U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 1  
U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 2  
U.S. - Massachusetts - Oil & Hazardous Material List - Reportable Quantity  
U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 1  
U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 2  
U.S. - Massachusetts - Right To Know List  
U.S. - Massachusetts - Toxics Use Reduction Act  
U.S. - Michigan - Occupational Exposure Limits - Ceilings  
U.S. - Michigan - Polluting Materials List  
U.S. - Minnesota - Chemicals of High Concern  
U.S. - Minnesota - Hazardous Substance List  
U.S. - Minnesota - Permissible Exposure Limits - Ceilings  
U.S. - New Jersey - Discharge Prevention - List of Hazardous Substances  
U.S. - New Jersey - Right to Know Hazardous Substance List  
U.S. - New Jersey - Special Health Hazards Substances List  
U.S. - New York - Occupational Exposure Limits - TWAs  
U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances  
U.S. - North Dakota - Air Pollutants - Guideline Concentrations - 1-Hour  
U.S. - Oregon - Permissible Exposure Limits - TWAs  
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List  
U.S. - Pennsylvania - RTK (Right to Know) List  
U.S. - Rhode Island - Air Toxics - Acceptable Ambient Levels - 1-Hour  
U.S. - Rhode Island - Air Toxics - Acceptable Ambient Levels - Annual  
U.S. - South Carolina - Toxic Air Pollutants - Maximum Allowable Concentrations  
U.S. - South Carolina - Toxic Air Pollutants - Pollutant Categories  
U.S. - Tennessee - Occupational Exposure Limits - Ceilings

# Nickel Metal Hydride Battery Pack

This document replaces Bacharach MSDS reference number 0099-0144.

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

U.S. - Texas - Effects Screening Levels - Long Term  
U.S. - Texas - Effects Screening Levels - Short Term  
U.S. - Vermont - Permissible Exposure Limits - Ceilings  
U.S. - Washington - Permissible Exposure Limits - Ceilings  
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights 25 Feet to Less Than 40 Feet  
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights 40 Feet to Less Than 75 Feet  
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights 75 Feet or Greater  
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights Less Than 25 Feet

### Iron (7439-89-6)

U.S. - Colorado - Primary Drinking Water Regulations - Secondary Maximum Contaminant Levels (SMCLs)  
U.S. - Florida - Drinking Water Standards - Secondary Maximum Contaminant Levels (SMCLs)  
U.S. - Georgia - Drinking Water - Secondary Maximum Contaminant Levels (SMCLs)  
U.S. - Massachusetts - Drinking Water - Secondary Maximum Contaminant Levels (SMCLs)  
U.S. - Missouri - Drinking Water - Secondary Maximum Contaminant Levels (SMCLs)  
U.S. - Nevada - Drinking Water - Secondary Maximum Contaminant Levels (SMCLs)  
U.S. - New Hampshire - Drinking Water - Secondary Maximum Contaminant Levels (SMCLs)  
U.S. - New Jersey - Secondary Drinking Water Standards - Recommended Upper Limits (RULs)  
U.S. - New Jersey - Water Quality - Ground Water Quality Criteria  
U.S. - New Jersey - Water Quality - Practical Quantitation Levels (PQLs)  
U.S. - New Mexico - Water Quality - Standards for Ground Water of 10,000 mg/L TDS Concentration or Less  
U.S. - Pennsylvania - Drinking Water - Secondary Maximum Contaminant Levels (SMCLs)  
U.S. - Rhode Island - Water Quality Standards - Chronic Freshwater Aquatic Life Criteria  
U.S. - Rhode Island - Water Quality Standards - Human Health Criteria for Consumption of Water and Aquatic Organisms  
U.S. - South Carolina - Secondary Maximum Contaminant Levels (SMCLs)  
U.S. - Texas - Drinking Water Standards - Secondary Constituent Levels (SCLs)  
U.S. - Texas - Effects Screening Levels - Long Term  
U.S. - Texas - Effects Screening Levels - Short Term  
U.S. - Utah - Drinking Water - Secondary Maximum Contaminant Levels (SMCLs)  
U.S. - Virginia - Water Quality Standards - Public Water Supply Effluent Limits  
U.S. - Alaska - Water Quality Standards - Chronic Aquatic Life Criteria for Fresh Water

### Manganese (7439-96-5)

U.S. - California - SCAQMD - Toxic Air Contaminants - Non-Cancer Chronic  
U.S. - California - Toxic Air Contaminant List (AB 1807, AB 2728)  
U.S. - Colorado - Primary Drinking Water Regulations - Secondary Maximum Contaminant Levels (SMCLs)  
U.S. - Connecticut - Hazardous Air Pollutants - HLVs (30 min)  
U.S. - Connecticut - Hazardous Air Pollutants - HLVs (8 hr)  
U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities  
U.S. - Florida - Drinking Water Standards - Secondary Maximum Contaminant Levels (SMCLs)  
U.S. - Georgia - Drinking Water - Secondary Maximum Contaminant Levels (SMCLs)  
U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations  
U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Emission Levels (ELs)  
U.S. - Idaho - Occupational Exposure Limits - Ceilings  
U.S. - Illinois - Toxic Air Contaminant Carcinogens  
U.S. - Illinois - Toxic Air Contaminants  
U.S. - Louisiana - Reportable Quantity List for Pollutants  
U.S. - Maine - Air Pollutants - Hazardous Air Pollutants  
U.S. - Massachusetts - Drinking Water - Secondary Maximum Contaminant Levels (SMCLs)  
U.S. - Massachusetts - Right To Know List  
U.S. - Massachusetts - Toxics Use Reduction Act  
U.S. - Michigan - Occupational Exposure Limits - STELs  
U.S. - Michigan - Occupational Exposure Limits - TWAs  
U.S. - Minnesota - Chemicals of High Concern

# Nickel Metal Hydride Battery Pack

This document replaces Bacharach MSDS reference number 0099-0144.

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

U.S. - Minnesota - Groundwater Health Risk Limits  
U.S. - Minnesota - Hazardous Substance List  
U.S. - Minnesota - Permissible Exposure Limits - STELS  
U.S. - Minnesota - Permissible Exposure Limits - TWAs  
U.S. - Missouri - Drinking Water - Secondary Maximum Contaminant Levels (SMCLs)  
U.S. - Nevada - Drinking Water - Secondary Maximum Contaminant Levels (SMCLs)  
U.S. - New Hampshire - Drinking Water - Secondary Maximum Contaminant Levels (SMCLs)  
U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - 24-Hour  
U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - Annual  
U.S. - New Jersey - Discharge Prevention - List of Hazardous Substances  
U.S. - New Jersey - Environmental Hazardous Substances List  
U.S. - New Jersey - Right to Know Hazardous Substance List  
U.S. - New Jersey - Secondary Drinking Water Standards - Recommended Upper Limits (RULs)  
U.S. - New Jersey - Special Health Hazards Substances List  
U.S. - New Jersey - Water Quality - Ground Water Quality Criteria  
U.S. - New Jersey - Water Quality - Practical Quantitation Levels (PQLs)  
U.S. - New Mexico - Water Quality - Standards for Ground Water of 10,000 mg/L TDS Concentration or Less  
U.S. - New York - Occupational Exposure Limits - Ceilings  
U.S. - North Carolina - Control of Toxic Air Pollutants  
U.S. - North Dakota - Air Pollutants - Guideline Concentrations - 8-Hour  
U.S. - Oregon - Permissible Exposure Limits - Ceilings  
U.S. - Pennsylvania - Drinking Water - Secondary Maximum Contaminant Levels (SMCLs)  
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List  
U.S. - Pennsylvania - RTK (Right to Know) List  
U.S. - Rhode Island - Air Toxics - Acceptable Ambient Levels - 24-Hour  
U.S. - Rhode Island - Air Toxics - Acceptable Ambient Levels - Annual  
U.S. - South Carolina - Secondary Maximum Contaminant Levels (SMCLs)  
U.S. - Tennessee - Occupational Exposure Limits - STELS  
U.S. - Tennessee - Occupational Exposure Limits - TWAs  
U.S. - Texas - Drinking Water Standards - Secondary Constituent Levels (SCLs)  
U.S. - Texas - Effects Screening Levels - Long Term  
U.S. - Texas - Effects Screening Levels - Short Term  
U.S. - Utah - Drinking Water - Secondary Maximum Contaminant Levels (SMCLs)  
U.S. - Vermont - Permissible Exposure Limits - Ceilings  
U.S. - Vermont - Permissible Exposure Limits - STELS  
U.S. - Vermont - Permissible Exposure Limits - TWAs  
U.S. - Virginia - Water Quality Standards - Public Water Supply Effluent Limits  
U.S. - Washington - Permissible Exposure Limits - Ceilings  
U.S. - Washington - Permissible Exposure Limits - STELS  
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights 25 Feet to Less Than 40 Feet  
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights 40 Feet to Less Than 75 Feet  
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights 75 Feet or Greater  
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights Less Than 25 Feet

### **Cobalt (7440-48-4)**

U.S. - California - SCAQMD - Toxic Air Contaminants With Proposed Risk Values  
U.S. - California - Toxic Air Contaminant List (AB 1807, AB 2728)  
U.S. - Connecticut - Hazardous Air Pollutants - HLVs (30 min)  
U.S. - Connecticut - Hazardous Air Pollutants - HLVs (8 hr)  
U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities  
U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations  
U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Emission Levels (ELs)  
U.S. - Idaho - Occupational Exposure Limits - TWAs

# Nickel Metal Hydride Battery Pack

This document replaces Bacharach MSDS reference number 0099-0144.

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

U.S. - Illinois - Toxic Air Contaminant Carcinogens  
U.S. - Illinois - Toxic Air Contaminants  
U.S. - Maine - Air Pollutants - Hazardous Air Pollutants  
U.S. - Maine - Chemicals of High Concern  
U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 1  
U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 2  
U.S. - Massachusetts - Oil & Hazardous Material List - Reportable Quantity  
U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 1  
U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 2  
U.S. - Massachusetts - Right To Know List  
U.S. - Massachusetts - Toxics Use Reduction Act  
U.S. - Michigan - Occupational Exposure Limits - TWAs  
U.S. - Minnesota - Chemicals of High Concern  
U.S. - Minnesota - Hazardous Substance List  
U.S. - Minnesota - Permissible Exposure Limits - TWAs  
U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - 24-Hour  
U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - Annual  
U.S. - New Jersey - Discharge Prevention - List of Hazardous Substances  
U.S. - New Jersey - Environmental Hazardous Substances List  
U.S. - New Jersey - Right to Know Hazardous Substance List  
U.S. - New Jersey - Special Health Hazards Substances List  
U.S. - New Mexico - Water Quality - Standards for Ground Water of 10,000 mg/L TDS Concentration or Less  
U.S. - New York - Occupational Exposure Limits - TWAs  
U.S. - North Dakota - Air Pollutants - Guideline Concentrations - 8-Hour  
U.S. - Oregon - Permissible Exposure Limits - TWAs  
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List  
U.S. - Pennsylvania - RTK (Right to Know) List  
U.S. - Rhode Island - Air Toxics - Acceptable Ambient Levels - Annual  
U.S. - Tennessee - Occupational Exposure Limits - TWAs  
U.S. - Texas - Effects Screening Levels - Long Term  
U.S. - Texas - Effects Screening Levels - Short Term  
U.S. - Vermont - Permissible Exposure Limits - TWAs  
U.S. - Washington - Permissible Exposure Limits - STELs  
U.S. - Washington - Permissible Exposure Limits - TWAs  
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights 25 Feet to Less Than 40 Feet  
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights 40 Feet to Less Than 75 Feet  
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights 75 Feet or Greater  
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights Less Than 25 Feet

### Aluminum (7429-90-5)

U.S. - California - Toxic Air Contaminant List (AB 1807, AB 2728)  
U.S. - Colorado - Primary Drinking Water Regulations - Secondary Maximum Contaminant Levels (SMCLs)  
U.S. - Connecticut - Hazardous Air Pollutants - HLVs (30 min)  
U.S. - Connecticut - Hazardous Air Pollutants - HLVs (8 hr)  
U.S. - Connecticut - Water Quality Standards - Acute Freshwater Aquatic Life Criteria  
U.S. - Connecticut - Water Quality Standards - Chronic Freshwater Aquatic Life Criteria  
U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities  
U.S. - Florida - Drinking Water Standards - Secondary Maximum Contaminant Levels (SMCLs)  
U.S. - Georgia - Drinking Water - Secondary Maximum Contaminant Levels (SMCLs)  
U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations  
U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Emission Levels (ELs)  
U.S. - Maryland - Surface Water Quality Standards - Acute Freshwater Aquatic Life  
U.S. - Maryland - Surface Water Quality Standards - Chronic Freshwater Aquatic Life

# Nickel Metal Hydride Battery Pack

This document replaces Bacharach MSDS reference number 0099-0144.

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

U.S. - Massachusetts - Drinking Water - Secondary Maximum Contaminant Levels (SMCLs)  
U.S. - Massachusetts - Right To Know List  
U.S. - Massachusetts - Toxics Use Reduction Act  
U.S. - Michigan - Occupational Exposure Limits - TWAs  
U.S. - Minnesota - Hazardous Substance List  
U.S. - Minnesota - Permissible Exposure Limits - TWAs  
U.S. - Missouri - Drinking Water - Secondary Maximum Contaminant Levels (SMCLs)  
U.S. - Nevada - Drinking Water - Secondary Maximum Contaminant Levels (SMCLs)  
U.S. - New Hampshire - Drinking Water - Secondary Maximum Contaminant Levels (SMCLs)  
U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - 24-Hour  
U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - Annual  
U.S. - New Jersey - Discharge Prevention - List of Hazardous Substances  
U.S. - New Jersey - Environmental Hazardous Substances List  
U.S. - New Jersey - Right to Know Hazardous Substance List  
U.S. - New Jersey - Secondary Drinking Water Standards - Recommended Upper Limits (RULs)  
U.S. - New Jersey - Special Health Hazards Substances List  
U.S. - New Jersey - Water Quality - Ground Water Quality Criteria  
U.S. - New Jersey - Water Quality - Practical Quantitation Levels (PQLs)  
U.S. - New Mexico - Water Quality - Standards for Ground Water of 10,000 mg/L TDS Concentration or Less  
U.S. - North Dakota - Air Pollutants - Guideline Concentrations - 8-Hour  
U.S. - Oregon - Permissible Exposure Limits - TWAs  
U.S. - Pennsylvania - Drinking Water - Secondary Maximum Contaminant Levels (SMCLs)  
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List  
U.S. - Pennsylvania - RTK (Right to Know) List  
U.S. - Rhode Island - Water Quality Standards - Acute Freshwater Aquatic Life Criteria  
U.S. - Rhode Island - Water Quality Standards - Chronic Freshwater Aquatic Life Criteria  
U.S. - South Carolina - Secondary Maximum Contaminant Levels (SMCLs)  
U.S. - Tennessee - Occupational Exposure Limits - TWAs  
U.S. - Texas - Drinking Water Standards - Secondary Constituent Levels (SCLs)  
U.S. - Texas - Effects Screening Levels - Long Term  
U.S. - Texas - Effects Screening Levels - Short Term  
U.S. - Utah - Drinking Water - Secondary Maximum Contaminant Levels (SMCLs)  
U.S. - Vermont - Permissible Exposure Limits - TWAs  
U.S. - Washington - Permissible Exposure Limits - STELS  
U.S. - Washington - Permissible Exposure Limits - TWAs  
U.S. - Alaska - Water Quality Standards - Acute Aquatic Life Criteria for Fresh Water  
U.S. - Alaska - Water Quality Standards - Chronic Aquatic Life Criteria for Fresh Water

### Nickel oxide (1313-99-1)

U.S. - California - SCAQMD - Toxic Air Contaminants - Carcinogens  
U.S. - California - SCAQMD - Toxic Air Contaminants - Non-Cancer Acute  
U.S. - California - SCAQMD - Toxic Air Contaminants - Non-Cancer Chronic  
U.S. - California - SDAPCD - Toxic Air Contaminants - Carcinogenic Impacts Must Be Calculated  
U.S. - Connecticut - Hazardous Air Pollutants - HLVs (30 min)  
U.S. - Connecticut - Hazardous Air Pollutants - HLVs (8 hr)  
U.S. - Maine - Chemicals of High Concern  
U.S. - Massachusetts - Allowable Ambient Limits (AALs)  
U.S. - Massachusetts - Allowable Threshold Concentrations (ATCs)  
U.S. - Massachusetts - Right To Know List  
U.S. - Massachusetts - Threshold Effects Exposure Limits (TELEs)  
U.S. - Minnesota - Chemicals of High Concern  
U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - 24-Hour  
U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - Annual

# Nickel Metal Hydride Battery Pack

This document replaces Bacharach MSDS reference number 0099-0144.

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

U.S. - New Jersey - Right to Know Hazardous Substance List  
U.S. - New Jersey - Special Health Hazards Substances List  
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List  
U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances  
U.S. - Pennsylvania - RTK (Right to Know) List  
U.S. - South Carolina - Toxic Air Pollutants - Maximum Allowable Concentrations  
U.S. - South Carolina - Toxic Air Pollutants - Pollutant Categories  
U.S. - Texas - Effects Screening Levels - Long Term  
U.S. - Texas - Effects Screening Levels - Short Term

### **Cobalt(II) oxide (1307-96-6)**

U.S. - Illinois - Toxic Air Contaminant Carcinogens  
U.S. - Illinois - Toxic Air Contaminants  
U.S. - Maine - Chemicals of High Concern  
U.S. - Minnesota - Chemicals of High Concern  
U.S. - Texas - Effects Screening Levels - Long Term  
U.S. - Texas - Effects Screening Levels - Short Term

### **Cobalt hydroxide (21041-93-0)**

U.S. - Illinois - Toxic Air Contaminant Carcinogens  
U.S. - Illinois - Toxic Air Contaminants

### **Canadian Regulations**

The product itself is not considered hazardous and is a manufactured article according to 29 CFR 1910.1200 and the Canadian HPA the following information is for the ingredients contained within this material that are not available under normal conditions of use.

### **Nickel Metal Hydride Battery Pack**

WHMIS Classification	Uncontrolled product according to WHMIS classification criteria
----------------------	---

### **Nickel hydroxide (12054-48-7)**

Listed on the Canadian DSL (Domestic Substances List) inventory.  
Listed on the Canadian Ingredient Disclosure List

WHMIS Classification	Class D Division 2 Subdivision A - Very toxic material causing other toxic effects Class D Division 1 Subdivision B - Toxic material causing immediate and serious toxic effects Class D Division 2 Subdivision B - Toxic material causing other toxic effects
----------------------	--

### **Lithium hydroxide (1310-65-2)**

Listed on the Canadian DSL (Domestic Substances List) inventory.  
Listed on the Canadian Ingredient Disclosure List

WHMIS Classification	Class E - Corrosive Material
----------------------	------------------------------

### **Lanthanum (7439-91-0)**

Listed on the Canadian DSL (Domestic Substances List) inventory.

WHMIS Classification	Class B Division 4 - Flammable Solid
----------------------	--------------------------------------

### **Neodymium (7440-00-8)**

Listed on the Canadian DSL (Domestic Substances List) inventory.

WHMIS Classification	Class B Division 4 - Flammable Solid Class B Division 6 - Reactive Flammable Material
----------------------	--

### **Praseodymium (7440-10-0)**

Listed on the Canadian DSL (Domestic Substances List) inventory.

WHMIS Classification	Class B Division 6 - Reactive Flammable Material
----------------------	--

### **Cerium (7440-45-1)**

Listed on the Canadian DSL (Domestic Substances List) inventory.

WHMIS Classification	Class B Division 4 - Flammable Solid
----------------------	--------------------------------------



# Nickel Metal Hydride Battery Pack

This document replaces Bacharach MSDS reference number 0099-0144.

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

<b>Potassium hydroxide (1310-58-3)</b>	
Listed on the Canadian DSL (Domestic Substances List) inventory. Listed on the Canadian Ingredient Disclosure List	
WHMIS Classification	Class D Division 1 Subdivision B - Toxic material causing immediate and serious toxic effects Class E - Corrosive Material
<b>Zinc oxide (1314-13-2)</b>	
Listed on the Canadian DSL (Domestic Substances List) inventory. Listed on the Canadian Ingredient Disclosure List	
WHMIS Classification	Uncontrolled product according to WHMIS classification criteria
<b>Nickel (7440-02-0)</b>	
Listed on the Canadian DSL (Domestic Substances List) inventory. Listed on the Canadian Ingredient Disclosure List	
WHMIS Classification	Class D Division 2 Subdivision A - Very toxic material causing other toxic effects Class D Division 2 Subdivision B - Toxic material causing other toxic effects
<b>Zinc (7440-66-6)</b>	
Listed on the Canadian DSL (Domestic Substances List) inventory.	
WHMIS Classification	Class B Division 6 - Reactive Flammable Material
<b>Sodium hydroxide (1310-73-2)</b>	
Listed on the Canadian DSL (Domestic Substances List) inventory. Listed on the Canadian Ingredient Disclosure List	
WHMIS Classification	Class E - Corrosive Material
<b>Iron (7439-89-6)</b>	
Listed on the Canadian DSL (Domestic Substances List) inventory.	
WHMIS Classification	Class B Division 4 - Flammable Solid
<b>Manganese (7439-96-5)</b>	
Listed on the Canadian DSL (Domestic Substances List) inventory. Listed on the Canadian Ingredient Disclosure List	
WHMIS Classification	Class D Division 2 Subdivision A - Very toxic material causing other toxic effects
<b>Cobalt (7440-48-4)</b>	
Listed on the Canadian DSL (Domestic Substances List) inventory. Listed on the Canadian Ingredient Disclosure List	
WHMIS Classification	Class D Division 2 Subdivision A - Very toxic material causing other toxic effects Class D Division 2 Subdivision B - Toxic material causing other toxic effects
<b>Aluminum (7429-90-5)</b>	
Listed on the Canadian DSL (Domestic Substances List) inventory. Listed on the Canadian Ingredient Disclosure List	
WHMIS Classification	Class B Division 6 - Reactive Flammable Material Class B Division 4 - Flammable Solid
<b>Nickel oxide (1313-99-1)</b>	
Listed on the Canadian DSL (Domestic Substances List) inventory. Listed on the Canadian Ingredient Disclosure List	
WHMIS Classification	Class D Division 2 Subdivision A - Very toxic material causing other toxic effects
<b>Cobalt(II) oxide (1307-96-6)</b>	
Listed on the Canadian DSL (Domestic Substances List) inventory. Listed on the Canadian Ingredient Disclosure List	
WHMIS Classification	Class D Division 1 Subdivision B - Toxic material causing immediate and serious toxic effects Class D Division 2 Subdivision A - Very toxic material causing other toxic effects

# Nickel Metal Hydride Battery Pack

This document replaces Bacharach MSDS reference number 0099-0144.

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

	Class D Division 2 Subdivision B - Toxic material causing other toxic effects
<b>Cobalt hydroxide (21041-93-0)</b>	
Listed on the Canadian DSL (Domestic Substances List) inventory.	
WHMIS Classification	Class D Division 1 Subdivision B - Toxic material causing immediate and serious toxic effects Class D Division 2 Subdivision A - Very toxic material causing other toxic effects Class D Division 2 Subdivision B - Toxic material causing other toxic effects

<b>Zinc hydroxide (20427-58-1)</b>	
Listed on the Canadian DSL (Domestic Substances List) inventory.	
Listed on the Canadian Ingredient Disclosure List	

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

### SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

<b>Revision date</b>	: 04/09/2014
<b>Other Information</b>	: This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200. Within the meaning of the OSHA Hazard Communication Standard [29 CFR 1910.1200] and the Canadian Hazardous Products Act (HPA): this product is considered a manufactured article and is not considered a hazard when used in a manner which is consistent with the labeled directions.

#### GHS Full Text Phrases:

The product itself is not considered hazardous and is a manufactured article according to 29 CFR 1910.1200 and the Canadian HPA the following information is for the ingredients contained within this material that are not available under normal conditions of use.

Acute Tox. 1 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 1
Acute Tox. 3 (Oral)	Acute toxicity (oral) Category 3
Acute Tox. 4 (Inhalation)	Acute toxicity (inhalation) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Aquatic Acute 3	Hazardous to the aquatic environment - Acute Hazard Category 3
Aquatic Chronic 1	Hazardous to the aquatic environment - Chronic Hazard Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment - Chronic Hazard Category 2
Aquatic Chronic 3	Hazardous to the aquatic environment - Chronic Hazard Category 3
Aquatic Chronic 4	Hazardous to the aquatic environment - Chronic Hazard Category 4
Carc. 1A	Carcinogenicity Category 1A
Carc. 2	Carcinogenicity Category 2
Carc. Not classified	Carcinogenicity Not classified
Comb. Dust	Combustible Dust
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Eye Dam. Not classified	Serious eye damage/eye irritation Not classified
Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
Flam. Sol. 1	Flammable solids Category 1
Flam. Sol. 2	Flammable solids Category 2
Met. Corr. 1	Corrosive to metals Category 1
Met. Corr. Not classified	Corrosive to metals Not classified
Muta. 2	Germ cell mutagenicity Category 2
Pyr. Sol. 1	Pyrophoric solids Category 1
Repr. 1B	Reproductive toxicity Category 1B
Repr. 2	Reproductive toxicity Category 2

# Nickel Metal Hydride Battery Pack

This document replaces Bacharach MSDS reference number 0099-0144.

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Resp. Sens. 1	Respiratory sensitisation Category 1
Resp. Sens. 1B	Respiratory sensitisation Category 1B
Self-heat. 1	Self-heating substances and mixtures Category 1
Skin Corr. 1A	Skin corrosion/irritation Category 1A
Skin Corr. 1B	Skin corrosion/irritation Category 1B
Skin Irrit. 2	Skin corrosion/irritation Category 2
Skin Irrit. Not classified	Skin corrosion/irritation Not classified
Skin Sens. 1	Skin sensitization Category 1
STOT RE 1	Specific target organ toxicity (repeated exposure) Category 1
Water-react. 1	Substances and mixtures which in contact with water emit flammable gases Category 1
Water-react. 2	Substances and mixtures which in contact with water emit flammable gases Category 2
H228	Flammable solid
H232	May form combustible dust concentrations in air
H250	Catches fire spontaneously if exposed to air
H251	Self-heating; may catch fire
H260	In contact with water releases flammable gases which may ignite spontaneously
H261	In contact with water releases flammable gases
H290	May be corrosive to metals
H301	Toxic if swallowed
H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H318	Causes serious eye damage
H319	Causes serious eye irritation
H330	Fatal if inhaled
H332	Harmful if inhaled
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
H341	Suspected of causing genetic defects
H350	May cause cancer
H351	Suspected of causing cancer
H360	May damage fertility or the unborn child
H361	Suspected of damaging fertility or the unborn child
H372	Causes damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H402	Harmful to aquatic life
H410	Very toxic to aquatic life with long lasting effects
H411	Toxic to aquatic life with long lasting effects
H412	Harmful to aquatic life with long lasting effects
H413	May cause long lasting harmful effects to aquatic life

### Party Responsible for the Preparation of This Document

Bacharach, Inc.  
621 Hunt Valley Circle  
New Kensington, PA 15068  
724-334-5760  
msdsr@mybacharach.com

# Nickel Metal Hydride Battery Pack

This document replaces Bacharach MSDS reference number 0099-0144.

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

---

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*

North America GHS US 2012 & WHMIS 2