

The products referenced herein are “articles” under 29 CFR 1910.1200(c) and are not subject to OSHA's requirements for material safety data sheets under its Hazard Communication Standard, 29 CFR 1910.1200. This Product Data Sheet is provided as a service to our customers.

## Section I - Product and Company Information

**Identity:** Nickel Metal Hydride (NiMH) Batteries  
**Models:** All  
**Effective Date:** March 17, 2020

**Manufacturer**  
 Motorola Solutions, Inc.  
 500 W. Monroe Street  
 Chicago, Illinois 60661 USA  
**Phone: 1-847-576-5000**

## Section II – Composition Information

Motorola Solutions battery packs contain NiMH cells from various manufacturers. NiMH cells are generally composed of the following major ingredients:

| Cell component     | Common chemical name / General name        | CAS number | Concentration range |
|--------------------|--|------------|---------------------|
| Positive electrode | Nickel metal                               | 7440-02-0  | 10 - 25%            |
|                    | Nickel hydroxide                           | 12054-48-7 | 10 - 25%            |
|                    | Cobalt                                     | 7440-48-4  | < 10%               |
| Negative electrode | Metal hydride alloy including one or more: |            |                     |
|                    | Lanthanum                                  | 7439-91-0  | 5 -15%              |
|                    | Cerium                                     | 7440-45-1  |                     |
|                    | Neodymium                                  | 7440-00-8  |                     |
|                    | Praseodymium                               | 7440-10-0  |                     |
|                    | Nickel                                     | 7440-02-0  | 10 - 30%            |
|                    | Cobalt                                     | 7440-48-4  | <10%                |
| Electrolyte        | Potassium hydroxide                        | 1310-58-3  | 10 - 15%            |
|                    | Sodium hydroxide                           | 1310-73-2  |                     |
| Other components   | Nylon                                      | n/a        | < 3%                |
|                    | Polypropylene                              |            |                     |
|                    | Steel                                      | n/a        | 10 - 25%            |

## Section III – Hazards Identification

Potentially hazardous materials are fully contained in a hermetically sealed case designed to withstand normal handling and use. Exposure could occur only if the battery or cells have been opened, disassembled, crushed, burned, exposed to high temperatures (> 60° C or 140° F), or subjected to other types of abuse. Exposure to cell contents may be harmful under some circumstances.

Follow instructions and precautions for safe use of the battery pack.

## Section IV – First Aid Measures

Cell manufacturers recommend that in case of exposure to cell contents, wash affected area for at least 15 minutes with generous amounts of water and seek medical attention. The electrolyte is caustic and exposure may cause severe irritation or chemical burns.

## Section V – Firefighting Measures

Fires involving these types of battery packs should be flooded with any available extinguishing media. Fires involving large quantities of batteries may produce toxic, corrosive, or irritating fumes.

## Section VI – Accidental Release Measures

If batteries are spilled and damaged, they should be disposed of according to the disposal section.

## Section VII – Handling and Storage

The battery pack and enclosed cells should not be opened, disassembled, crushed, burned, or exposed to high temperatures (> 60° C or 140° F).

## Section VIII – Exposure Controls / Personal Protection

---

No personal protection is required during normal handling and use. Exposure to the ingredients contained within the cells within the battery pack could be harmful under some circumstances. In case of exposure to cell contents, wash affected area for at least 15 minutes with generous amounts of water and seek medical attention.

## Section IX – Physical and Chemical Properties

---

These batteries are solid articles. Properties such as odor, pH, vapor pressure, solubility, etc. are not applicable.

## Section X – Stability and Reactivity

---

|                                  |   |
|----------------------------------|---|
| Reactivity                       | None during normal handling and use   |
| Incompatibility                  | None during normal handling and use   |
| Hazardous Decomposition Products | None during normal handling and use   |
| Conditions to Avoid              | The battery pack and enclosed cells should not be opened, disassembled, crushed, burned, or exposed to high temperatures. |

## Section XI – Toxicological Information

---

There are no known toxicological properties of the batteries during normal handling and use.

## Section XII – Ecological Information

---

There are no known ecological risks of the batteries during normal handling and use.

## Section XIII – Disposal

---

All Motorola Solutions NiMH batteries contain recyclable materials. Recycling options available in your local area should be considered when disposing of this product. Do not dispose of in fire.

## Section XIV – Transport Information

---

UN 3496 – Batteries, nickel-metal hydride

Motorola Solutions sealed NiMH battery packs are considered to be “dry cell” batteries are not defined as dangerous goods under the IATA Dangerous Goods Regulations, ICAO Technical Instructions and the U.S. hazardous materials regulations (49 CFR). Nickel metal hydride batteries are defined as dangerous goods under the IMDG code. When packaged and shipped by Motorola Solutions, Inc., these batteries are not subject to the dangerous goods regulations as they are compliant with the requirements contained in the following special provisions.

| Regulatory Body | Special Provisions    |
|-----------------|-----------------------|
| IATA / ICAO     | UN 3496 SP A199       |
| IMDG            | UN3496 SP 963         |
| US DOT          | 49 CFR 172.102 SP 130 |
| TDG             | UN3496 SP 97          |
| ADR             | Not Regulated         |
| UN Model        | UN3496 SP 117         |

In addition, the IATA Dangerous Goods Regulations and ICAO Technical Instructions require the words “not restricted” and the Special Provision number A199 be provided on the air waybill, when an air waybill is issued.

The requirements for shipping these batteries, in all modes of transportation, are that they be separated from each other to prevent short-circuits and to prevent movement that could lead to short-circuits. Products must also be packed in strong packaging that can withstand the rigors normal to transportation.

**For emergencies involving Motorola Solutions battery products, call CHEMTREC at 1-800-424-9300.**

## Section XV – Regulatory Information

---

The products referenced herein are “articles” under 29 CFR 1910.1200(c) and are not subject to OSHA's requirements for material safety data sheets under its Hazard Communication Standard, 29 CFR 1910.1200.

## Section XVI – Other Information

---

Notice: The information and recommendations set forth are made in good faith and are believed to be accurate at the date of preparation. Motorola makes no warranty expressed or implied with respect to this information and recommendations and disclaims all liability from reliance on it.