Material Safety Data Sheet

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This material safety data sheet (MSDS) is provided as a courtesy in response to a customer request. This product is not regulated under, and a MSDS is not required for this product by the OSHA Hazard Communication Standard (29 CFR 1910.1200) because, when used as recommended or under ordinary conditions, it should not present a health and safety hazard. However, use or processing of the product not in accordance with the product’s recommendations or not under ordinary conditions may affect the performance of the product and may present potential health and safety hazards.

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Nickel Cadmium Battery Pack
MANUFACTURER: 3M
DIVISION: Occupational Health & Environ. Safety
ADDRESS: 3M Center
St. Paul, MN 55144-1000

EMERGENCY PHONE: 1-800-364-3577 or (651) 737-6501 (24 hours)

Issue Date: 04/16/2004
Supercedes Date: 04/08/2003
Document Group: 07-7138-6

Product Use:
Intended Use: Battery

SECTION 2: INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>C.A.S. No.</th>
<th>% by Wt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nickel, Nickel hydroxide, Nickel oxide</td>
<td>Unknown</td>
<td>20 - 32</td>
</tr>
<tr>
<td>Cadmium, Cadmium hydroxide, Cadmium oxide</td>
<td>Unknown</td>
<td>13 - 22</td>
</tr>
<tr>
<td>Sodium hydroxide</td>
<td>Unknown</td>
<td>0 - 4</td>
</tr>
<tr>
<td>Potassium Hydroxide</td>
<td>Unknown</td>
<td>0 - 4</td>
</tr>
<tr>
<td>Cobalt, Cobalt hydroxide, Cobalt oxide</td>
<td>Unknown</td>
<td>0.5 - 2</td>
</tr>
</tbody>
</table>

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Odor, Color, Grade: Odorless, blue polypropylene sealed case which contains 4 sealed Nickel-Cadmium batteries.
General Physical Form: Solid
Immediate health, physical, and environmental hazards: This product, when used under reasonable conditions and
in accordance with the 3M directions for use, should not present a health hazard. However, use or processing of the product in a manner not in accordance with the product's directions for use may affect the performance of the product and may present potential health and safety hazards.

### 3.2 POTENTIAL HEALTH EFFECTS

**Eye Contact:**
No health effects are expected.

**Skin Contact:**
No health effects are expected.

**Inhalation:**
No health effects are expected.

**Ingestion:**
No health effects are expected.

### 3.3 POTENTIAL ENVIRONMENTAL EFFECTS

Not determined.

### SECTION 4: FIRST AID MEASURES

#### 4.1 FIRST AID PROCEDURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

**Eye Contact:** No need for first aid is anticipated.

**Skin Contact:** No need for first aid is anticipated.

**Inhalation:** No need for first aid is anticipated.

**If Swallowed:** No need for first aid is anticipated.

### SECTION 5: FIRE FIGHTING MEASURES

#### 5.1 FLAMMABLE PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Not Applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>AutoIgnition temperature</td>
<td></td>
</tr>
<tr>
<td>Flash Point</td>
<td></td>
</tr>
<tr>
<td>Flammable Limits - LEL</td>
<td></td>
</tr>
<tr>
<td>Flammable Limits - UEL</td>
<td></td>
</tr>
<tr>
<td>OSHA Flammability Classification:</td>
<td></td>
</tr>
</tbody>
</table>

#### 5.2 EXTINGUISHING MEDIA

Use fire extinguishers with class B extinguishing agents (e.g., dry chemical, carbon dioxide).
5.3 PROTECTION OF FIRE FIGHTERS

Special Fire Fighting Procedures: Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

Unusual Fire and Explosion Hazards: No unusual fire or explosion hazards are anticipated.

Note: See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Accidental Release Measures: Not applicable.

SECTION 7: HANDLING AND STORAGE

7.1 HANDLING
This product is considered to be an article which does not release or otherwise result in exposure to a hazardous chemical under normal use conditions.

7.2 STORAGE
Not applicable.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS
Not applicable.

8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

8.2.1 Eye/Face Protection
Not applicable.

8.2.2 Skin Protection
Not applicable.

8.2.3 Respiratory Protection
Not applicable.

8.2.4 Prevention of Swallowing
Not applicable.

8.3 EXPOSURE GUIDELINES
None Established
SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Odor, Color, Grade: Odorless, blue polypropylene sealed case which contains 4 sealed Nickel-Cadmium batteries.

General Physical Form: Solid
Autoignition temperature Not Applicable
Flash Point Not Applicable
Flammable Limits - LEL Not Applicable
Flammable Limits - UEL Not Applicable
Boiling point Not Applicable

Vapor Density Not Applicable
Vapor Pressure Not Applicable
Specific Gravity Not Applicable
pH Not Applicable
Melting point No Data Available
Solubility In Water Not Applicable

Evaporation rate Not Applicable
Volatile Organic Compounds Not Applicable
Percent volatile Not Applicable
VOC Less H2O & Exempt Solvents Not Applicable
Viscosity Not Applicable

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid: None known

Hazardous Polymerization: Hazardous polymerization will not occur.

Hazardous Decomposition or By-Products

<table>
<thead>
<tr>
<th>Substance</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>None known.</td>
<td>Not Specified</td>
</tr>
</tbody>
</table>

Hazardous Decomposition: Under recommended usage conditions, hazardous decomposition products are not expected. Hazardous decomposition products may occur as a result of oxidation, heating, or reaction with another material.

SECTION 11: TOXICOLOGICAL INFORMATION

Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.
SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

Not applicable.

CHEMICAL FATE INFORMATION

Not applicable.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method: Nickel-Cadmium batteries are to be recycled. 3M Occupational Health & Environmental Safety Division has a license agreement with Rechargeable Battery Recycling Corporation (RBRC) for recycling of used Battery Packs containing Nickel-Cadmium batteries. Please call 1-800-BATTERY for instructions on the nearest recycling location for your area.

EPA Hazardous Waste Number (RCRA): D006 (Cadmium)

Since regulations vary, consult applicable regulations or authorities before disposal.

SECTION 14: TRANSPORT INFORMATION

ID Number(s):
70-0703-1634-7, 70-0705-1545-0, 70-0705-1557-5, 78-8029-4461-7, 78-8046-1497-8

Please contact the emergency numbers listed on the first page of the MSDS for Transportation Information for this material.

SECTION 15: REGULATORY INFORMATION

US FEDERAL REGULATIONS
Contact 3M for more information.

311/312 Hazard Categories:
Fire Hazard - Yes  Pressure Hazard - No  Reactivity Hazard - No  Immediate Hazard - No  Delayed Hazard - No

STATE REGULATIONS
Contact 3M for more information.

CHEMICAL INVENTORIES
This product is an article as defined by TSCA regulations, and is exempt from TSCA Inventory listing requirements.
Contact 3M for more information.

INTERNATIONAL REGULATIONS
Contact 3M for more information.

This MSDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: OTHER INFORMATION

NFPA Hazard Classification
Health: 0  Flammability: 0  Reactivity: 0  Special Hazards: None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

HMIS Hazard Classification
Health: 0  Flammability: 0  Reactivity: 0  Protection: X - See PPE section.

Hazardous Material Identification System (HMIS(r)) hazard ratings are designed to inform employees of chemical hazards in the workplace. These ratings are based on the inherent properties of the material under expected conditions of normal use and are not intended for use in emergency situations. HMIS(r) ratings are to be used with a fully implemented HMIS(r) program. HMIS(r) is a registered mark of the National Paint and Coatings Association (NPCA).

Revision Changes:
Section 16: NFPA hazard classification heading was modified.
Section 16: HMIS hazard classification heading was modified.
Section 3: Potential environmental effects heading was modified.
Copyright was modified.
Section 5: Fire fighting procedures information was modified.
Section 15: 311/312 hazard categories heading was modified.
Section 15: International regulations information was modified.
Section 15: State regulations information was modified.
Section 15: US federal regulations information was modified.
Section 10: Hazardous polymerization heading was modified.
Section 16: HMIS explanation was modified.
Section 16: NFPA explanation was modified.
Section 15: Inventories information was modified.
Article disclaimer text (following the copyright) was modified.
Section 12: Ecotoxicological information heading was modified.
Section 12: Chemical fate information heading was modified.
Section 16: NFPA hazard classification for special hazards was modified.
Section 8: Exposure guidelines information - none - was modified.
Section 10: Hazardous decompostion heading was modified.
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