## 8.EXPOSURE CONTROLS / PERSONAL PROTECTION

・Engineering measures :

No engineering measure is necessary during normal use. In case of internal cell materials' leakage, the information below will be useful.

・Control parameters

| Common chemical name / General name | ACGIH(2007) | |
|---|---|---|
| | TLV-TWA | BEI |
| Nickel, Nickel Compounds | (As Ni)<br>Metal : 1.5mg/$m^3$<br>Soluble compounds : 0.1mg/$m^3$<br>Insoluble compounds : 0.2mg/$m^3$ | - |
| Cobalt Compounds | (As Co)<br>0.02mg/$m^3$ | In urine : 15 micro g/l<br>In blood : 1 micro g/l |
| Hydrogen Absorbing Alloy | 1.5mg/$m^3$ | - |
| Zinc oxide | 2mg/$m^3$ | - |
| Carbon Black | 3.5mg/$m^3$ | - |
| Potassium Hydroxide | - | - |
| Sodium Hydroxide | - | - |
| Lithium Hydroxide | - | - |

ACGIH: American Conference of Governmental Industrial Hygienists, Inc.
TLV-TWA: Threshold Limit Value-time weighted average concentration
BEI: Biological Exposure Indices

・Personal protective equipment

Respiratory protection: Protective mask
Hand protection: Protective gloves
Eye protection: Protective glasses designed to protect against liquid splashes
Skin and body protection: Working clothes with long sleeve and long trousers

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## 9.PHYSICAL AND CHEMICAL PROPERTIES

・Appearance

Physical state: Solid
Form: Cylindrical
Color: Metallic color (without tube/label)
Odour: No odour

・pH : NA

・Specific temperatures/temperature ranges at which changes in physical state occur :
There is no useful information for the product as a mixture.

・Flash point : NA

・Explosion properties : NA

・Density : around 1.5 ~ 6.0g/$cm^3$

・Solubility ,with indication of the solvent(s) : Insoluble in water

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## 10.STABILITY AND REACTIVITY

・Stability : Stable under normal use

・Hazardous reactions occurring under specific conditions

By misuse of a battery cell or the like, oxygen or hydrogen accumulates in the cell and the internal pressure rises. These gases may be emitted through the gas release vent. When fire is near, these gases may take fire.

When a battery cell is heated strongly by the surrounding fire, acrid or harmful fume may be emitted.

・Conditions to avoid : Direct sunlight, high temperature and high humidity

・Materials to avoid : Conductive materials, water, seawater, strong oxidizers and strong acids

・Hazardous decomposition products: Acrid or harmful fume is emitted during fire.

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