D. Incompatible materials

- Not available

E. Hazardous decomposition products

- May emit flammable vapour if involved in fire.

11. TOXICOLOGICAL INFORMATION

A. Information on the likely routes of exposure

○ **(Respiratory tracts)**

- May cause respiratory irritation.

○ **(Oral)**

- Harmful if swallowed

○ **(Eye·Skin)**

- May cause an allergic skin reaction

B. Delayed and immediate effects and also chronic effects from short and long term exposure

○ **Acute toxicity**

*** Oral - ATE MIX : 300mg/kg < ATEmix <= 2000mg/kg**

- [Carbon] : LD50 > 10000 ㎎/㎏ Rat (IUCLID, HSDB)
- [Manganese] : LD50 >2000 ㎎/㎏ Rat (OECD TG 420, GLP)
- [Cobalt] : LD50 550 ㎎/㎏ Rat (OECD TG 425, GLP)(ECHA)
- [Carboxymethyl ether cellulose] : LD50 > 5000 ㎎/㎏ Rat

*** Dermal - ATE MIX : >5000mg/kg**

- [Cobalt] : LD50 >2000 ㎎/㎏ Rat (Read-across: 14024-48-7, OECD TG 402, GLP)(ECHA)

*** Inhalation - ATE MIX : Not available**

- [Carbon] : LC50 > 64.4 ㎎/ℓ Rat
- [Manganese] : LC50 >5.14 ㎎/ℓ 4 hr Rat (OECD TG 403, GLP)
- [Cobalt] : LC50 ≥0.05 ㎎/ℓ Rat (OECD TG 436, GLP)(ECHA)

○ **Skin corrosion/irritation**

- Not available

○ **Serious eye damage/irritation**

- Not available

○ **Respiratory sensitization**

- Not available

○ **Skin sensitization**

- May cause an allergic skin reaction

○ **Carcinogenicity**

*** IARC**

- [Nickel] : Group 2B (Nickel refinery dust)
- [Cobalt] : Group 2B (Cobalt and cobalt compounds)
- [Cobalt] : Group 2B (Cobalt metal without tungsten carbide)
- [Nickel] : Group 1 (Nickel, metallic and alloys)
- [Nickel] : Group 1 (Nickel compounds)
- [Nickel] : Group 1 (Nickel, insoluble inorganic compounds)
- [Nickel] : Group 1 (Nickel, soluble inorganic compounds)

*** OSHA**

- Not available

*** ACGIH**

- [Aluminium] : A4 (Aluminum metal and isoluble compounds)
- [Nickel] : A5 (Nickel refinery dust)
- [Cobalt] : A3 (Cobalt and cobalt compounds)
- [Cobalt] : A3 (Cobalt metal without tungsten carbide)
- [Nickel] : A5 (Nickel, metallic and alloys)
- [Nickel] : A5 (Nickel compounds)
- [Nickel] : A5 (Nickel, insoluble inorganic compounds)
- [Nickel] : A5 (Nickel, soluble inorganic compounds)

*** NTP**