- [Nickel] : K (Nickel refinery dust)
- [Nickel] : K (Nickel, metallic and alloys)
- [Nickel] : K (Nickel compounds)
- [Nickel] : K (Nickel, insoluble inorganic compounds)
- [Nickel] : K (Nickel, soluble inorganic compounds)

*** EU CLP**

- [Nickel] : Carc. 2 (Nickel refinery dust)
- [Nickel] : Carc. 2 (Nickel, metallic and alloys)
- [Nickel] : Carc.2 (Nickel, metallic and alloys)
- [Nickel] : Carc. 2 (Nickel compounds)
- [Nickel] : Carc. 2 (Nickel, insoluble inorganic compounds)
- [Nickel] : Carc. 2 (Nickel, soluble inorganic compounds)

○ **Germ cell mutagenicity**

- Not available

○ **Reproductive toxicity**

- May damage fertility or the unborn child

○ **STOT-single exposure**

- Causes damage to organs(Refer Section SDS 11)
- May cause respiratory irritation.

○ **STOT-repeated exposure**

- Causes damage to organs through prolonged or repeated exposure (Refer Section SDS 11)
- May cause damage to organs through prolonged or repeated exposure (Refer Section SDS 11)

○ **Aspiration hazard**

- Not available

12. ECOLOGICAL INFORMATION

A. Ecotoxicity

○ **Fish**

- [Manganese] : LC50 >3.6 ㎎/ℓ 96 hr Oncorhynchus mykiss(OECD TG 203, GLP)(ECHA)
- [Cobalt] : LC50 > 100 ㎎/ℓ 96 hr
- [Copper] : LC50 = 0.0028~9.15 ㎎/ℓ 96 hr (ECHA)

○ **Crustaceans**

- [Manganese] : EC50 >1.6 ㎎/ℓ 48 hr Daphnia magna(OECD TG 202, GLP)(ECHA)
- [Copper] : EC50 = 0.0338~1.213 ㎎/ℓ 48 hr (ECHA)

○ **Algae**

- [Manganese] : EC50 4.5 ㎎/ℓ 72 hr (Desmodesmus subspicatus)(ECHA)
- [Copper] : LC50 = 0.0165~0.987 ㎎/ℓ 72hr (ECHA)

B. Persistence and degradability

○ **Persistence**

- [Carbon] : log Kow = 0.78 (Estimate)
- [Copper] : log Kow = -0.57 (Estimate)

○ **Degradability**

- [Carbon] : BOD = 5 ca. 2mgO2/l , COD = 2000mg/g

C. Bioaccumulative potential

○ **Bioaccumulative potential**

- [Carbon] : BCF = 1.378 (Estimate)
- [Manganese] : <81 BCF
- [Cobalt] : BCF = 4000
- [Copper] : BCF = 5830

○ **Biodegration**

- Not available

D. Mobility in soil

- Not available