

## GHS Classification

**ID1042**

**CAS 562-81-2**

### Physical Hazards

**barium tetracyanoplatinate**

Date Classified: Oct. 23, 2006 (Environmental Hazards: Mar. 31, 2006)

Reference Manual: GHS Classification Manual (Feb. 10, 2006)

Hazard class	Classification	symbol	signal word	hazard statement	Rational for the classification
1 Explosives	Not applicable	-	-	-	There are no chemical groups associated with explosive properties present in the molecules.
2 Flammable gases	Not applicable	-	-	-	Solid (GHS definition)
3 Flammable aerosols	Not applicable	-	-	-	Not aerosol products
4 Oxidizing gases	Not applicable	-	-	-	Solid (GHS definition)
5 Gases under pressure	Not applicable	-	-	-	Solid (GHS definition)
6 Flammable liquids	Not applicable	-	-	-	Solid (GHS definition)
7 Flammable solids	Not classified	-	-	-	Not classified because it is considered as non-combustible substances structurally
8 Self-reactive substances and mixtures	Not applicable	-	-	-	There are no chemical groups associated with explosive or self-reactive properties present in the molecule.
9 Pyrophoric liquids	Not applicable	-	-	-	Solid (GHS definition)
10 Pyrophoric solids	Not classified	-	-	-	Not classified because it is considered as Non-combustible substances structurally
11 Self-heating substances and mixtures	Not classified	-	-	-	Not classified because it is considered as non-combustible substances structurally
12 Substances and mixtures, which in contact with water, emit flammable gases	Not classified	-	-	-	Stable to water. (As for tetrahydrate of this substance, aqueous solubility values is acquired.)
13 Oxidizing liquids	Not applicable	-	-	-	Solid (GHS definition)
14 Oxidizing solids	Not applicable	-	-	-	Inorganic compounds containing no oxygen and halogen.
15 Organic peroxides	Not applicable	-	-	-	Inorganic compound
16 Corrosive to metals	Classification not possible	-	-	-	Test methods applicable to solid substances are not available.

### Health Hazards

Hazard class	Classification	symbol	signal word	hazard statement	Rational for the classification
1 Acute toxicity (oral)	Classification not possible	-	-	-	No data available
1 Acute toxicity (dermal)	Classification not possible	-	-	-	No data available
1 Acute toxicity (inhalation: gas)	Not applicable	-	-	-	Solid (GHS definition)
1 Acute toxicity (inhalation: vapour)	Classification not possible	-	-	-	No data available
1 Acute toxicity (inhalation: dust, mist)	Classification not possible	-	-	-	No data available
2 Skin corrosion / irritation	Category 3	-	Warning	Causes mild skin irritation	There is no data of this product. But the water-soluble barium compounds are supposed to indicate skin irritation (ACGIH-TLV (2006)). Since there is description that each of barium (107 EHC (J), 1990) and cyanide (61 CICAD (J), 2004) indicate mild skin irritations, it was set to Category 3.
3 Serious eye damage / eye irritation	Category 2A-2B	Exclamation mark	Warning	Causes serious eye irritation	There is no this product data. But in ACGIH-TLV (2006), the water-soluble barium compounds irritates to the eye. There are the descriptions that barium (107 EHC (J), 1990) shows severe eye irritation, cyanide (61 CICAD (J), 2004) shows slight eye irritation, and platinum compound (125 EHC (J), 1991) shows eye irritation. From the above information, it is difficult to be subdivide, and it was classified into Category 2A-2B.
4 Respiratory/skin sensitization	Respiratory sensitization: Category 1; Skin sensitization: Category 1	(Respiratory sensitization)Health hazard; (Skin sensitization)Exclamation mark	(Respiratory sensitization)Danger; (Skin sensitization)Warning	(Respiratory sensitization)May cause allergy or asthma symptoms or breathing difficulties if inhaled; (Skin sensitization)May cause allergic skin reaction	Respiratory sensitization: Although there was no data for this substance, water-soluble platinum salt was classified as Category 1 according to Japan Society for Occupational Health advice (2005). Since platinum was indicated as the respiratory allergic substance by the Japanese Society of Occupational Allergy meeting, we classified it to be Category 1. Skin sensitization: although there is no data of this substance, water-soluble platinum salt is classified into 1 according to Association of Industrial Health (2005). Since platinum was used as the skin sensitization by the Japanese Society of Occupational Allergy, it was set to Category 1.
5 Germ cell mutagenicity	Classification not possible	-	-	-	Without data. In addition, in CICAD (J)61 (2004) and PIM G003 (WHO/ICPS, 1997), it is supposed that there is no mutagenic in a cyanide.
6 Carcinogenicity	Classification not possible	-	-	-	There is no data about this product. A water-soluble barium compounds (ACGIH-TLV, 2006) are equivalent to out of Category (A4), but the carcinogenicity evaluation of platinum salts is not sufficient (EHC (J), 125, 1991). So it cannot be classified due to insufficient data.

7	Toxic to reproduction	Classification not possible	-	-	-	There is no this product data, and although the description that "cyanide induces adverse effect against development only by the given dose or concentration which has toxicity in dam clearly" exists in CICAD (J) 61(2004). Since data is insufficient, it cannot be classified.
8	Specific target organs/systemic toxicity following single exposure	Category 1 (cardiovascular system, respiratory organs, central nervous system, skeletal muscles)	Health hazard	Danger	Cause damage to organs (cardiovascular system, respiratory organs, central nervous system, skeletal muscles)	There are no data for this substance. But the cardio-vascular system, respiratory system and central nervous system are listed as the target organs of the acute toxicity of the cyanide (CICAD (J), 61, 2004), and the cardio-vascular system and skeletal muscle as the target organs of the aqueous barium compound (possibly the effect of hypokalemia). The substance was classified as Category 1 (cardio-vascular system, respiratory system, central nervous system, skeletal muscle) because each source reference is a Priority 1 document.
9	Specific target organs/systemic toxicity following repeated exposure	Category 1 (central nervous system)	Health hazard	Danger	causes damage to organs (central nervous system) through prolonged or repeated	Although there was no data about this product, we classified it into Category 1(central nervous system) based on the description that repeated exposure of cyanide affects the central nervous systems (CICAD(J)61 (2004; Priority 1 document)).
10	Aspiration hazard	Classification not possible	-	-	-	No data available

### Environmental Hazards

Hazard class	Classification	symbol	signal word	hazard statement	Rational for the classification
11 Hazardous to the aquatic environment (acute)	Classification not possible	-	-	-	No data available
11 Hazardous to the aquatic environment (chronic)	Classification not possible	-	-	-	No data available.