GHS Classification

ID1396 Sodium nitrate

CAS 7631-99-4 Date Classified: Mar. 23, 2006 (Environmental Hazards: Feb. 10, 2006)

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

Hazard class		Classification	symbol	signal word	hazard statement	Rational for the classification
1	Explosives	Not classified	–	–	–	UNRTDG Class: 5.1
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	–	–	–	Non-combustible (ICSC (J) (2001))
8	Self-reactive substances and mixtures	Not applicable	–	–	–	Classified in oxidizing solids
9	Pyrophoric liquids	Not applicable	–	–	–	Solid (GHS definition)
10	Pyrophoric solids	Not classified	–	–	–	Non-combustible (ICSC (J), 2001)
11	Self-heating substances and mixtures	Not classified	–	–	–	Not combustible (ICSC(J) (2001))
12	Substances and mixtures, which in contact with water, emit flammable gases	Not classified	–	–	–	UNRTDG Class: 5.1
13	Oxidizing liquids	Not applicable	–	–	–	Solid (GHS definition)
14	Oxidizing solids	Category 3	Flame over circle	Warning	May intensify fire; oxidizer	UNRTDG Class: 5.1; PG III
15	Organic peroxides	Not applicable	–	–	–	Inorganic substance
16	Corrosive to metals	Not classified	–	–	–	UNRTDG Class: 5.1

Health Hazards

Hazard class		Classification	symbol	signal word	hazard statement	Rational for the classification
1	Acute toxicity (oral)	Category 4	Exclamation mark	Warning	Harmful if swallowed	We calculated based on the rat LD50 values : 1267mg/kg (RTECS, 2005, IUCLID, 2000), 3430mg/kg, 5200mg/kg and 3236mg/kg (IUCLID, 2000). The calculated value was 1964mg/kg, so the substance was classified as Category 4.
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 2	Exclamation mark	Warning	Causes skin irritation	The specific case etc. was not shown. But it was set as category 2 from there is the description that the skin is stimulated as effect of short-term exposure (ICSC (J) (2001)).
3	Serious eye damage / eye irritation	Category 2A-2B	Exclamation mark	Warning	Causes serious eye irritation	It was set as Category 2A-2B. Although there is description that an eye is stimulated as effect of short-term exposure in ICSC (J) and (2001), and the report of a concrete case was not indicated.
4	Respiratory/skin sensitization	Respiratory sensitization: Classification not possible; Skin sensitization: Classification not	–	–	–	No data available
5	Germ cell mutagenicity	Category 2	Health hazard	Warning	Suspected of causing genetic defects (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)	There is a positive result by the micronucleus test which used the mouse bone marrow cells and the chromosome aberration test using bone marrow cells of rat and a mouse, which in vivo mutagenicity test using somatic cell (RTECS, 2005). And there was no positive result in the in vivo genotoxicity test using a germ cells. So it is classified into Category 2.
6	Carcinogenicity	Classification not possible	–	–	–	Since it is not evaluated in the institution indicated in the technical indicator, it cannot classify.

7	Toxic to reproduction	Classification not possible	–	–	–	Classification not possible due to lack of data
8	Specific target organs/systemic toxicity following single exposure	Category 2 (blood system)	Health hazard	Warning	May cause damage to organs (blood system)	From the description in RTECS (2005) that methemoglobinemia was observed in the oral administration examination using the pig and intake of humans, and the description in ICSC (J) (2001) that methemoglobin may be generated by short-term exposure, it was judged that blood was target organ, and it was considered as Category 2.
9	Specific target organs/systemic toxicity following repeated exposure	Classification not possible	–	–	–	Classification not possible due to lack of data
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)	Not classified	–	–	–	It considered as the outside of Category from 96-hour LC50=5800mg/L of fishes (King salmon) (ECETOC TR 91 and 2003).
11	Hazardous to the aquatic environment (chronic)	Not classified	–	–	–	Since not water-insoluble (aqueous solubility =7.30*105mg/L(PHYSPROP Database, 2005)) and acute toxicity is low.