

GHS Classification

ID1111

potassium nitrite

CAS 7758-09-0

Date Classified: May 24, 2006 (Environmental Hazards: Mar. 31, 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	-	-	-	Not classified based on UNRTDG No. 1488, Class: 5.1, PGIII, though being nitrates containing N-O bonds as chemical groups associated with explosive properties present. "The substance has a high reactivity and could explode by the contact of various substances, fire, or heat." (ICSC(J), 200; Sax, 11th, 2004)
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	-	-	-	Nonflammable (ICSC (J), 2000). (However, this product is highly reactive and combustion is promoted by a contact with other substance. (ICSC(J), 2000))
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), 2000)
11 Self-heating substances and mixtures	Not classified	-	-	-	Not combustible (ICSC(J) (2000))
12 Substances and mixtures, which in contact with water, emit flammable gases	Not classified	-	-	-	Stable to water (the water solubility is obtained)
13 Oxidizing liquids	Not applicable	-	-	-	Solid (GHS definition)
14 Oxidizing solids	Category 2	Flame over circle	Danger	May intensify fire; oxidizer	UNRTDG No. 1488, Class: 5.1; PG II.
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	-	-	-	Classification not possible due to lack of data
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. (It is a solid. And there is no vapor pressure information, and it is unknown whether exposure to vapor is possible.)
1 Acute toxicity (inhalation: dust, mist)	Category 5	-	Warning	May be harmful if inhaled	It was set as Category 5 based on mouse LC50 value 42mg/L/4H (85g/m3/2H) (RTECS, 1997).
2 Skin corrosion / irritation	Category 2	Exclamation mark	Warning	Causes skin irritation	It was set as category 2 from the description that "reddening of the skin which stimulates the skin violently." (ICSC, 2000; SITTING, 2002; HSFS, 2004)
3 Serious eye damage / eye irritation	Category 2B	-	Warning	Causes eye irritation	Due to the description that "it irritates to the eye, causes redness and pain" (ICSC, 2000; SITTING, 2002), and it was classified into Category 2B.
4 Respiratory/skin sensitization	respiratory sensitization: Classification not possible; Skin sensitization: Classification not possible	(Respiratory sensitization)-; (Skin sensitization)-	(Respiratory sensitization)-; (Skin sensitization)-	(Respiratory sensitization)-; (Skin sensitization)-	No data available
5 Germ cell mutagenicity	Classification not possible	-	-	-	Although the in vitro mutagenicity test (RTECS, 1997) was positive, there being no examination data of in vivo mutagenicity. So it was presupposed that it cannot classify.
6 Carcinogenicity	Classification not possible	-	-	-	No data available

7	Toxic to reproduction	Category 2	Health hazard	Warning	Suspected of damaging fertility or the unborn child	There were two reports as for reproductive potential study of rats and guinea pig (RTECS(1997)), although the description about the general toxicity of those parental animals did not have, reproductive toxicity was manifested (the influence on a fertility, a miscarriage, stillbirth), and it was set as Category 2.
8	Specific target organs/systemic toxicity following single exposure	Category 2 (cardiovascular system, blood system); Category 3 (respiratory tract irritation)	Health hazard; Exclamation mark	Warning	May cause damage to organs (cardiovascular system, blood system); May cause respiratory irritation or may cause drowsiness and dizziness (respiratory tract irritation)	The substance was classified as Category 2 (cardio-vascular system, blood) and Category 3 (airway irritant) based on the reports in Priority 2 documents of the effects on the cardio-vascular system (ICSC, 2000; RTECS, 1997), and of the effects on blood (formation of methemoglobin) (ICSC, 2000; HSFS, 2004), and of airway irritant properties (ICSC, 2000; SITTI, 2002; HSFS, 2004) in humans.
9	Specific target organs/systemic toxicity following repeated exposure	Classification not possible	-	-	-	Although there is the description of the influence on the skin, the respiratory system, the liver, and the kidney of humans (SITTI (4th, 2002) and HSFS (2004) of Priority 2 document), there is no data which is supported, and it cannot be classified due to insufficient 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)	Classification not possible	-	-	-	Insufficient data available.
11 Hazardous to the aquatic environment (chronic)	Classification not possible	-	-	-	Classification not possible due to lack of data