

## GHS Classification

**ID1110**

**Sodium nitrite**

**CAS 7632-00-0**

Date Classified: Mar. 15, 2007 (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. 1500, Class: 5.1(6.1), 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 3	Flame over circle	Warning	May intensify fire; oxidizer	UNRTDG No. 1500, Class: 5.1(6.1); PG III.
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)	Category 3	Skull and crossbones	Danger	Toxic if swallowed	Based on the statistical analysis of the rat LD50 values: 180mg/kg (RTECS, 2004), 85mg/kg (IUCLID, 2000) and 200mg/kg (IUCLID, 2000), the substance was classified as Category 3.
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. But there is no vapor pressure information, and it is unknown whether exposure to vapor is possible.)
1 Acute toxicity (inhalation: dust, mist)	Category 1	Skull and crossbones	Danger	Fatal if inhaled	Category 1 because of "SPECIES: Rat; ENDPOINT: LC50; VALUE: 0.0055mg/L/4H; VALUE: 5.5mg/m3/4H" (RTECS, 2004)
2 Skin corrosion / irritation	Not classified	-	-	-	There is possibility of skin irritation (HSFS (1999)). But it carried out the outside of category since skin irritation was not seen by the test (compliance with GLP) of the rabbit (IUCLID (1999)).
3 Serious eye damage / eye irritation	Category 2A-2B	Exclamation mark	Warning	Causes serious eye irritation	Since the result is Mild (RTECS(2004)) and Moderate (IUCLID (2000)) (correspond to GLP) in the eye stimulativeness examination in the rabbit, it was classified into Category 2A-2B. In addition, it is difficult to subdivide the Category.
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	Not classified	-	-	-	It is negative in the mice dominant lethal test (IUCLID, 2000), the multigeneration translocation study (IUCLID, 2000; HSDB, 2003), the marrow small core examination of rats and mouse, and the mouse peripheral blood small core examination (NTP TR495, 2001). So it carried out the outside of Category. This micronucleus negative findings is supported also in WHO (JECFA FOOD ADDITIVES SERIES: 50, NITRITE, 2003). In addition, although two or more negativity and a positive report were made by IUCLID (2000) in the chromosome aberration test / micronucleus test of rodent, detailed are unknown and it was not used for the classification.

6	Carcinogenicity	Not classified	-	-	-	The descriptions that the results were negative for male and female in the carcinogenicity tests using rat, and the result was negative for male and indeterminacy for female in the carcinogenicity tests in mouse (NTP TR495 (2001)). But these findings are evaluated as negative by WHO. Therefore, it was out of the Category (JECFA FOOD ADDITIVES SERIES:50, NITRITE, 2003).
7	Toxic to reproduction	Not classified	-	-	-	In the study of the rat and mouse (JECFA (WHO FOOD ADDITIVES SERIES:50, NITRITE, 2003) and HSDB (2003)), since the impact on reproductive potential and teratogenicity were not admitted, they carried out the outside of Category.
8	Specific target organs/systemic toxicity following single exposure	Category 2 (cardiovascular system, blood system)	Health hazard	Warning	May cause damage to organs (cardiovascular system, blood system)	The substance was classified as Category 2 (cardio-vascular system, blood) because there are reports that it affects the cardio-vascular system (decrease of blood pressure, etc.) and blood (methemoglobinemia, etc.) in ICSC (J) (2000), HSFS (1999), HSDB (2003), RTECS(2004), which are Priority 2 documents.
9	Specific target organs/systemic toxicity following repeated exposure	Category 2 (blood)	Health hazard	Warning	May cause damage to organs (blood) through prolonged or repeated	In the repeat-administration studies to a rat, there were 2 reports of methemoglobinemia (RTECS (2004) of Priority 2 document), and it was classified into Category 2(blood) by comparison with the dosage for which toxicity was observed, and a guidance value.
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)	Category 1	Environment	Warning	Very toxic to aquatic life	It was classified into Category 1 from 96-hour LC50=0.36mg/L of fishes (Rainbow trout) (ECETOC TR91, 2003).
11 Hazardous to the aquatic environment (chronic)	Category 1	Environment	Warning	Very toxic to aquatic life with long lasting effects	Classified into Category 1, since acute toxicity was Category 1, and behavior in water and bioaccumulative potential are unknown.