

## GHS Classification

**ID429**

**Selenious acid**

**CAS 7783-00-8**

Date Classified: Aug. 22, 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 applicable	—	—	—	Containing no chemical groups with explosive properties
2 Flammable gases	Not applicable	—	—	—	Classified as "solid" according to GHS definition
3 Flammable aerosols	Not applicable	—	—	—	Not aerosol products
4 Oxidizing gases	Not applicable	—	—	—	Classified as "solid" according to GHS definition
5 Gases under pressure	Not applicable	—	—	—	Classified as "solid" according to GHS definition
6 Flammable liquids	Not applicable	—	—	—	Classified as "solid" according to GHS definition
7 Flammable solids	Not classified	—	—	—	Selenium dioxide (SeO <sub>2</sub> ), the anhydride of selenious acid, is classified as non-flammable according to ICSC (2004)
8 Self-reactive substances and mixtures	Not applicable	—	—	—	Containing no chemical groups with explosive or self-reactive properties
9 Pyrophoric liquids	Not applicable	—	—	—	Classified as "solid" according to GHS definition
10 Pyrophoric solids	Not classified	—	—	—	Selenium dioxide (SeO <sub>2</sub> ), the anhydride of selenious acid, is classified as non-flammable according to ICSC (2004)
11 Self-heating substances and mixtures	Not classified	—	—	—	Selenium dioxide (SeO <sub>2</sub> ), the anhydride of selenious acid, is classified as non-flammable according to ICSC (2004)
12 Substances and mixtures, which in contact with water, emit flammable gases	Not classified	—	—	—	Stable to water (water solubility: 167g/100cc (20degC), HSDB (2006))
13 Oxidizing liquids	Not applicable	—	—	—	Classified as "solid" according to GHS definition
14 Oxidizing solids	Classification not possible	—	—	—	Classification not possible due to lack of data, though being inorganic compounds containing oxygen
15 Organic peroxides	Not applicable	—	—	—	Not organic compounds
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	—	—	—	Insufficient data available
1 Acute toxicity (dermal)	Classification not possible	—	—	—	No data available
1 Acute toxicity (inhalation: gas)	Not applicable	—	—	—	Due to the fact that the substance is "solid" according to the GHS definition and inhalation of its gas is not expected.
1 Acute toxicity (inhalation: dust, mist)	Classification not possible	—	—	—	No data available
1 Acute toxicity (inhalation: dust, mist)	Classification not possible	—	—	—	No data available
2 Skin corrosion / irritation	Category 1A-1C	Corrosion	Danger	Causes severe skin burns and eye damage	Based on the description in EHC 58 (1986) of the human health effects: "Selenious acid, which is readily deliquescent, burns the skin when in contact with moisture on the skin from sweating." The substance is thus considered corrosive to the skin, though the severity of the effects is unknown. Although classified into Category 1A-1C, it should be placed in Category 1A from the viewpoint of safety if further subclassification is
3 Serious eye damage / eye irritation	Category 1	Corrosion	Danger	Causes serious eye damage	Based on the description in ICSC (J) (2000) of the human health effects: "Corrosive to the eye, skin and respiratory tract."
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) —	Respiratory sensitization: No data available Skin sensitization: No data available
5 Germ cell mutagenicity	Classification not possible	—	—	—	No data available As for the health hazards, refer to "ID1063, Sodium Selenite, CAS: 10102-18-8."
6 Carcinogenicity	Not classified	—	—	—	Due to the fact that the substance is classified as Category D by EPA (1993), Group 3 (SELENIUM AND SELENIUM COMPOUNDS) by IARC (1987).
7 Toxic to reproduction	Classification not possible	—	—	—	Classification not possible in the absence of data on reproductive toxicity. The results of teratogenicity studies with rats, mice, rabbits, hamsters, and crab-eating macaques suggest no evidence of malformation up to doses inducing parental toxicity, described in CERI Hazard Data 2001-39(2) (2002).
8 Specific target organs/systemic toxicity following single exposure	Classification not possible	—	—	—	Insufficient data available  The acute toxicity of inorganic selenium compounds manifests in humans as "clinical findings including vomiting, diarrhea, laboured breathing, weakness, unstable gait, coma; histological findings including pulmonary edema, necrosis of the liver, degeneration of the skeletal muscles, renal tubular hydropic degeneration, swelling and rupture of the myocardial mitochondria" (PATTY (4th, 2000)).

9	Specific target organs/systemic toxicity following repeated exposure	Category 1 (nervous system) Category 2 (respiratory organs, liver)	Health hazard	Danger	Causes damage to organs through prolonged or repeated exposure (nervous system) May cause damage to organs through prolonged or repeated exposure (respiratory)	Based on the human evidence including "vomiting, dizziness, dysosmia" (CERI Hazard Data 2001-39(2) (2002)), "nasal hypersensitivity, persistent garlic-like smell, hypersensitiveness, tissue damage and liver damage" (ICSC (J) (2000)). The effects on the respiratory organs and liver are classified into Category 2 since the priority rating of the referenced study is 2.
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