

GHS Classification

ID680

Ammonium chloride

CAS 12125-02-9

Date Classified: May 24, 2006 (Environmental Hazards: Feb. 20, 2007)

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	-	-	-	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	-	-	-	Non-combustible (Weiss, 2nd, 1985; etc.)
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	-	-	-	Non-combustible (Weiss, 2nd, 1985; etc.)
11 Self-heating substances and mixtures	Not classified	-	-	-	Non-combustible (Weiss, 2nd, 1985; etc.)
12 Substances and mixtures, which in contact with water, emit flammable gases	Not applicable	-	-	-	The chemical structure of the substance does not contain metals or metalloids(B, Si, P, Ge, As, Se, Sn, Sb, Te, Bi, Po, At).
13 Oxidizing liquids	Not applicable	-	-	-	Solid (GHS definition)
14 Oxidizing solids	Classification not possible	-	-	-	Classification not possible, though inorganic compounds containing halogen.
15 Organic peroxides	Not applicable	-	-	-	Inorganic substance
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 4	Exclamation mark	Warning	Harmful if swallowed	It was set as Category 4 based on the description of LD50=1650 mg/kg in a rat (ACGIH (2002)).
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	It was classified as Category 3 based on the description that as effects of short-term exposure it "stimulates the skin", and as primary disaster / an acute symptoms cause "redness" on humans (ICSC (J) (2000)).
3 Serious eye damage / eye irritation	Category 2A-2B	Exclamation mark	Warning	Causes serious eye irritation	There is a statement that stimulates an eye by short-term exposure in humans (ICSC (J), (2000)), and that redness and a pain of the eye are caused as the primary disaster / an acute symptoms (ICSC (J), (2000)). With a rabbit, there are an evaluation with mild (ACGIH (2002), RTECS (2005)) and severe (RTECS (2005)), and a statement that although cataract, iridal bleeding, and the appearance of fibrin of the anterior chamber of eye, etc. were seen, it recovered (HSDB (2005)). It was set as Category 2A-2B based on the above information.
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 Skin sensitization : Although there is a statement that the result of the maximization test with guinea pigs was negative(IUCLID (2000)), it was an information of Priority 2 and the only data on hand, it was decided that it could not be classified due to the insufficiency of data..
5 Germ cell mutagenicity	Not classified	-	-	-	Since it gave negative in mice micronucleus test (IUCLID (2000)), we classified it as Out Of Category according to the technical guideline.
6 Carcinogenicity	Classification not possible	-	-	-	Classification not possible due to lack of data

7	Toxic to reproduction	Category 2	Health hazard	Warning	Suspected of damaging fertility or the unborn child	Although there is no statement on toxicity to the parents in mice, there is a statement that malformation was observed in their offsprings (HSDB (2005)). Moreover, there is a statement that ovary hypertrophy, follicular maturation, luteal formation, hypertrophy of uterus, hypertrophy of mamilla, and milk secretion were observed in non-crossed female rabbits (EHC 54 (1986)), and there is also a statement that absorbed embryos amounted to one fourth at a dose occurring metabolic acidosis in parent rats (IUCRID (2000)). Based on the above-mentioned, it was classified into Category 2.
8	Specific target organs/systemic toxicity following single exposure	Category 3 (respiratory tract irritation)	Exclamation mark	Warning	May cause respiratory irritation or may cause drowsiness and dizziness (respiratory tract irritation)	There is the description that respiratory is irritated by short-term exposure and the description that inhalation produces coughs and pharyngeal pain (ICSC (J) (2000)), it is classified into Category 3 (respiratory irritation).
9	Specific target organs/systemic toxicity following repeated exposure	Category 1 (systemic toxicity)	Health hazard	Danger	Causes damage to organs (systemic toxicity) through prolonged or repeated exposure	It was classified as Category 1 (systemic toxicity) based on the statement that metabolic acidosis was occurred in humans (ACGIH (2002)). In addition, although there is no statement of dosage, there is a description that also in a rat, a rabbit, and a dog, osteoporosis is produced by long-term administrations, and the cause is metabolic acidosis (EHC 54 (1986)).
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 2	-	-	Toxic to aquatic life	It was classified into Category 2 from 96-hour LC50=0.696mg NH3/L (ammonium-chloride concentration equivalent: 2.19 mg/L) of fishes (Rainbow trout) (ECETOC TR91, 2003).
11 Hazardous to the aquatic environment (chronic)	Category 2	Environment	-	Toxic to aquatic life with long lasting effects	Classified into Category 2, since acute toxicity was Category 2 and behavior in water and bioaccumulative potential are unknown.