

GHS Classification

ID1397

Ammonium nitrate

CAS 6484-52-2

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 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	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 5	—	Warning	May be harmful if swallowed	We calculated based on the rat LD50 values : 2217mg/kg (RTECS, 2005, IUCLID, 2000), 2800mg/kg, 2462mg/kg, 2950mg/kg, 5600mg/kg and 4820mg/kg (IUCLID, 2000), and 4500mg/kg (HSDB, 2005)s. The calculated value was 2798 mg/kg, so the substance was classified as Category 5.
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)	Not classified	—	—	—	Not classified because of "SPECIES: Rat; ENDPOINT: LC50(4hr.; VALUE: >88.8mg/L"(IUCLID, 2000)
2 Skin corrosion / irritation	Category 2	Exclamation mark	Warning	Causes skin irritation	There is description that skin irritation was not admitted by the test using the rabbit (IUCLID (2000)), it was set to category 2 since ICSC (J) (2001), HSDB (2005), HSFS (1998), and SITTING (4th, 2002) had no report of specific cases but there is description that the skin of what is indicated and is not may be stimulated.
3 Serious eye damage / eye irritation	Category 2A-2B	Exclamation mark	Warning	Causes serious eye irritation	Although change of the eye which corresponds to criteria for diagnosis of irritation by the eye irritation tests using the rabbit indicated to ECETOC TR 48 (1992) is not admitted. But there is description that there is stimulativeness to the human eye in any of ICSC(J) (2001), HSDB (2005), HSFS (1998), and SITTING (2002). So it was set as Category 2A-2B.
4 Respiratory/skin sensitization	Respiratory sensitization: Classification not possible; Skin sensitization: Classification not possible	—	—	—	No data available
5 Germ cell mutagenicity	Classification not possible	—	—	—	Classification not possible due to lack of data
6 Carcinogenicity	Classification not possible	—	—	—	No data available
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); Category 3 (respiratory tract irritation)	Health hazard; Exclamation mark	Warning	May cause damage to organs (blood system); May cause respiratory irritation or may cause drowsiness and dizziness (respiratory tract irritation)	From the description in RTECS (2005) that methemoglobinemia was observed in oral administration examination in rat, and the description in ICSC (J) (2001), HSDB (2005), HSFS (1998), and SITTIG (4th, 2002) that methemoglobin or abnormal hemoglobin may be generated, it was judged that blood was target organ, and it was considered as Category 2. Moreover, from the description in ICSC (J) (2001), HSDB (2005), HSFS (1998), and SITTIG (4th, 2002) that the airway is stimulated, it was judged that it has airway stimulativeness and was considered as Category 3.
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 carried out the outside of Category from 96-hour LC50=5657mg/L of fishes (Rainbow trout) (IUCLID, 2000).
11 Hazardous to the aquatic environment (chronic)	Not classified	–	–	–	Since not water-insoluble (water solubility=118.3g/100cc(HSDB, 2004)) and acute toxicity is low.