

GHS Classification

ID947

Diammonium peroxydisulfate

CAS 7727-54-0

Date Classified: Jul. 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 | - | - | - | 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 substances |
| 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 | Classification not possible | - | - | - | There is no data including the melting point data used as the judgment material of examination propriety. |

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 considered as category 4 based on the following data: Rat LD50 value: 820mg/kg (ACGIH 7th, 2001, NICNAS, 2001), 495mg/kg (NICNAS, 2001), and 600mg/kg (NICNAS, 2001). |
| 1 Acute toxicity (dermal) | Not classified | - | - | - | Based on rabbit LD50 value: >10000mg/kg (ACGIH 7th, 2001, NICNAS, 2001) and rat LD50 value: >2000mg/kg (NICNAS, 2001), it was set as the outside of Category. |
| 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 | - | - | - | There is data that rat LC50 (4 hours) value: >2.95mg/L and LC50 (1 hour) value: 520mg/L (4-hour equivalent 130mg/L)(ACGIH (7th, 2001), NICNAS (2001)). But category not to be specified if the lower value of >2.95mg/L is adopted, therefore, it was presupposed that it cannot be classified. |
| 2 Skin corrosion / irritation | Category 2 | Exclamation mark | Warning | Causes skin irritation | It was set as Category 2 from description that the skin irritations responses were acknowledged in humans evidence of exposure (ACGIH (7th, 2001) and NICNAS (2001)). |
| 3 Serious eye damage / eye irritation | Category 2B | - | Warning | Causes eye irritation | We classified it as Category 2B based on the description that it was concluded that it stimulated the eyes slightly based on the test using the rabbits (NICNAS (2001)). |
| 4 Respiratory/skin sensitization | Respiratory sensitization: Category 1; Skin sensitization: Category 1 | (Respiratory sensitization)Health hazard; (Skin sensitization)Exclamation mark | (Respiratory sensitization)Danger; (Skin sensitization)Warning | (Respiratory sensitization)May cause allergy or asthma symptoms or breathing difficulties if inhaled; (Skin sensitization)May cause allergic skin reactions | Respiratory organ: There was a case report that asthma symptoms were induced by inhalation exposure in human in NICNAS (2001), so we categorized it as Category 1 since it was concluded as positive for respirators sensitizing property in NICNAS (2001). Skin : There were reports of two or more cases which gave the positive reaction by Patch test in NICNAS (2001), and it was concluded that the skin sensitizing was positive in NICNAS (2001), furthermore, we found the description that 30% or more indicated the positive in Optimization Test using the guinea pigs in NICNAS (2001), therefore we classified it to be Category 1. |
| 5 Germ cell mutagenicity | Classification not possible | - | - | - | Classification not possible due to lack of data |
| 6 Carcinogenicity | Classification not possible | - | - | - | Classification not possible due to lack of data |

| | | | | | | |
|----|--|---|------------------|---------|---|--|
| 7 | Toxic to reproduction | Classification not possible | - | - | - | No data available |
| 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) | It was judged as Category 3 (respiratory irritation) because of descriptions in ICSC (J) (2002) and HSFS (2002) referring to that respiratory tracts were stimulated. |
| 9 | Specific target organs/systemic toxicity following repeated exposure | Category 1 (respiratory organs) | Health hazard | Danger | Causes damage to organs (respiratory organs) through prolonged or repeated exposure | Based on description that the effects on the respiratory system was observed in the range of guidance value for Category 1 in 90 day inhalation exposure test on rats (NICNAS (2001)), it was classified into Category 1 (respiratory tracts). |
| 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 3 | - | - | Harmful to aquatic life | It was classified into Category 3 from 96-hour LC50=76.3mg/L of fishes (Rainbow trout) (IUCLED, 2000). |
| 11 Hazardous to the aquatic environment (chronic) | Not classified | - | - | - | Toxicity factor is considered to be strong acid as aqueous solution, but toxic effect is eased by the buffer action in the environmental water. |