

GHS Classification

ID826

temephos

CAS 3383-96-8

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 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 | - | - | - | It is a solid by the definition of GHS. However, since this product is liquefied at 30 – 31 degC, and the flash point is 43 – 93 degC and it is equivalent to the flammable liquid of "Category 3" or "Category 4" depending on storage conditions, precautions are required. |
| 7 Flammable solids | Classification not possible | - | - | - | Classification not possible due to lack of data, though "Flammable" (ICSC(J), 1995; etc.) |
| 8 Self-reactive substances and mixtures | Classification not possible | - | - | - | Classification not possible due to lack of data, though the substance contains P-O bonds as chemical groups with self-reactive properties present. |
| 9 Pyrophoric liquids | Not applicable | - | - | - | Solid (GHS definition) |
| 10 Pyrophoric solids | Not classified | - | - | - | Although there was no data of firing point, it was judged that there was no spontaneous combustibility at normal temperature since the flash point was measured at normal temperature or higher temperatures (HSDB (2005), Gangolli (2nd, 1999)). |
| 11 Self-heating substances and mixtures | Classification not possible | - | - | - | Test suitable for a liquid state substance (solid with a melting point of 140degC or less) has not been established. |
| 12 Substances and mixtures, which in contact with water, emit flammable gases | Not classified | - | - | - | Since aqueous solubility is measured (ICSC (1995), Merck (13th, 2001), Howard (1997)), it can be judged that it is stable in the water. |
| 13 Oxidizing liquids | Not applicable | - | - | - | Solid (GHS definition) |
| 14 Oxidizing solids | Classification not possible | - | - | - | Classification not possible due to lack of data, though containing oxygen bonded to phosphorus. |
| 15 Organic peroxides | Not applicable | - | - | - | Organic compounds containing no -O-O- structure |
| 16 Corrosive to metals | Classification not possible | - | - | - | No data available |

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 | Category 5 based on SPECIES: Rat; ENDPOINT: LD50; VALUE:2719mg/kg; REFERENCE SOURCE: ACGIH (2001), PDS No.8 (1978) |
| 1 Acute toxicity (dermal) | Category 4 | Exclamation mark | Warning | Harmful in contact with skin | It was set as Category 4 based on LD50 = 1082mg/kg calculated from four data (PATTY (5th, 2001), PDS No.8 (1978)) of rabbit LD50 values. |
| 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 only data LC50 >1.3mg/L in the study considered to be based on a dust. So it cannot be classified. |
| 2 Skin corrosion / irritation | Category 3 | - | Warning | Causes mild skin irritation | It was set as Category 3 based on the statement that mild irritation was seen in the animal (PATTY (5th, 2001), RTECS (2004)), and the statement that there was irritant by contact in humans (HSFS (2000)). |
| 3 Serious eye damage / eye irritation | Category 2B | - | Warning | Causes eye irritation | Based on the statement that there is slight irritation in animals, it was set as Category 2B. |
| 4 Respiratory/skin sensitization | respiratory sensitization: Classification not possible; Skin sensitization: Not classified | (Respiratory sensitization)-; (Skin sensitization)- | (Respiratory sensitization)-; (Skin sensitization)- | (Respiratory sensitization)-; (Skin sensitization)- | Respiratory sensitization: No data. Skin sensitization: We classified it as Out Of Category based on the statement that it had no skin sensitization property for the animals(PATTY (5th, 2001)). |
| 5 Germ cell mutagenicity | Classification not possible | - | - | - | No data available |
| 6 Carcinogenicity | Classification not possible | - | - | - | No data available |

| | | | | | | |
|----|--|-----------------------------|---------------|---------|---|--|
| 7 | Toxic to reproduction | Not classified | - | - | - | It was considered as the outside of category based on the description that the effect is not observed on fertility property of parents and generating and growth of a child at the dose causing general toxicity to parents (ACGIH (2001), PDS No.8 (1978)). |
| 8 | Specific target organs/systemic toxicity following single exposure | Category 2 (nervous system) | Health hazard | Warning | May cause damage to organs (nervous system) | There is a statement (ACGIH (2001), PATTY (5th, 2001)) that a organophosphate poisonings specific symptoms and cholinesterase inhibition are acknowledged by oral administration at the dosage of the guidance value range of Category 2 with rats and mice. In humans, there is a statement (HSDB (2005), SITTIG (47th, 2002)) that the symptoms of severe poisoning is developed by inhalations and contacts, and that headache, perspiration, nausea, vomiting, diarrhea, coordinated movement loss, and death are seen by contact. It was set as Category 2 (nerve systems) based on the above information. |
| 9 | Specific target organs/systemic toxicity following repeated exposure | Category 1 (nervous system) | Health hazard | Danger | Causes damage to organs (nervous system) through prolonged or repeated exposure | There is a statement that red blood cell cholinesterase inhibition in rats, mice, and dogs exposed to guidance value within the limits of Category 1 is observed, and that typical cholinergic organophosphate intoxication is observed in those exposed to guidance value within the limits of Category 2 (ACGIH (2001), PATTY (5th, 2001), PDS No.8 (1978)). In humans, it is stated that respiratory insufficiency, debility, and prick pain feeling and incoordination at arms and legs are observed, and that the effect of the cholinesterase inhibitor may be accumulated (HSFS (2000), SITTIG (47th, 2002)). It was classified into Category 1 (nerve systems) based on the above information. |
| 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 | - | - | - | Insufficient data available. |
| 11 Hazardous to the aquatic environment (chronic) | Classification not possible | - | - | - | Classification not possible due to lack of data |