

## GHS Classification

ID625

CAS 1314-80-3

### Physical Hazards

## Diphosphorus pentasulfide

Date Classified: Mar. 23, 2006

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  | Classification not possible | –      | –           | –  | Although it is classified into the class 4.1 as subsidiary risks in UNRTDG, there is no data with defined test for Category classification. |
| 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              | –      | –           | –  | UNRTDG Class: 4.3 Subsidiary risks Class: 4.1   |
| 11 Self-heating substances and mixtures                                       | Not classified              | –      | –           | –  | UNRTDG Class: 4.3, Subsidiary risks Class: Class: 4.1   |
| 12 Substances and mixtures, which in contact with water, emit flammable gases | Category 2                  | Flame  | Danger      | In contact with water releases flammable gases | UNRTDG Class: 4.3; PG II  |
| 13 Oxidizing liquids  | Not applicable              | –      | –           | –  | Solid (GHS definition)  |
| 14 Oxidizing solids   | Not applicable              | –      | –           | –  | Containing no oxygen , chlorine and fluorine.   |
| 15 Organic peroxides  | Not applicable              | –      | –           | –  | Containing no -O-O- structure   |
| 16 Corrosive to metals  | Not classified              | –      | –           | –  | UNRTDG Class: 4.3, Subsidiary risks Class: Class: 4.1   |

### 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                | Category 4 based on SPECIES: Rat; ENDPOINT: LD50; VALUE: VALUE:389mg/kg; REFERENCE SOURCE: RTECS(2005)   |
| 1 Acute toxicity (dermal)                 | Category 5  | –                | Warning     | May be harmful in contact with skin | It was set as Category 5 based on rabbit LD50 value = 3160mg/kg (RTECS (2005)).  |
| 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 2  | Exclamation mark | Warning     | Causes skin irritation              | There are descriptions which suggest severe skin irritations on humans (HSFS (2001), ICSC (J), and (2004)) and moderate irritation with 24 hour exposure in rabbit skin irritation test (RTECS (2005)). Therefore, it was classified as  |
| 3 Serious eye damage / eye irritation     | Category 1  | Corrosion        | Danger      | Causes serious eye damage           | From description that strong stimulativeness, eye damage, a severe burn, and corrosiveness are indicated in humans (HSDB (2005), HSFS (2001), ICSC (J) (2004)), and from description that the moderate irritation is indicated by eye irritation test with a rabbit (comparing with the OECD Guidelines dosage is 1/5) (RTECS (2005)), it was judged that there was strong stimulative and critical lesional to an eye. So it was set as Category 1. |
| 4 Respiratory/skin sensitization          | Respiratory sensitization: Classification not possible; Skin sensitization: Classification not possible | –                | –           | –                                   | No data available  |
| 5 Germ cell mutagenicity                  | Classification not possible   | –                | –           | –                                   | No data available  |
| 6 Carcinogenicity                         | Classification not possible   | –                | –           | –                                   | No data available  |
| 7 Toxic to reproduction                   | Classification not possible   | –                | –           | –                                   | No data available  |

|    |  |  |               |         |  |  |
|----|--|--|---------------|---------|--|--|
| 8  | Specific target organs/systemic toxicity following single exposure   | Category 2 (respiratory organs, systemic toxicity) | Health hazard | Warning | May cause damage to organs (respiratory organs, systemic toxicity) | Based on the description that it has respiratory irritation of the inhalation exposure (Priority 1, ACGIH (2001)), and since the possibilities of respiratory and systemic toxicity such as pulmonary edemas, salivation, nausea, vomiting, diarrhoea, tachypnea, palpitation, abnormal heart rhythm, perspiration, and exhaustion are indicated by the exposure to the gas/steam of hydrogen sulfide and phosphoric acid generated from phosphorous pentasulphide by hydrolysis besides airway irritationin (Priority 2, HSDB (2005)). So it was set as Category 2. |
| 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)   | Classification not possible | –      | –           | –                | No data available               |
| 11 Hazardous to the aquatic environment (chronic) | Classification not possible | –      | –           | –                | No data available.              |