

## GHS Classification

**ID1090**

**arsenic pentachloride**

**CAS 22441-45-8**

Date Classified: Sep. 20, 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              | -            | -           | -  | Gas (GHS definition)  |
| 2 Flammable gases   | Not classified              | -            | -           | -  | Structurally, estimated non-combustible.  |
| 3 Flammable aerosols  | Not applicable              | -            | -           | -  | Not aerosol products  |
| 4 Oxidizing gases   | Classification not possible | -            | -           | -  | No data available   |
| 5 Gases under pressure  | Liquefied gas               | Gas cylinder | Warning     | Contains gas under pressure; may explode if heated | Not specified whether it is a high or low pressure liquefied gas, due to lack of data on a critical temp, though it seems to be stable in a liquid state at extremely low temperature (about -50degC) |
| 6 Flammable liquids   | Not applicable              | -            | -           | -  | Gas (GHS definition)  |
| 7 Flammable solids  | Not applicable              | -            | -           | -  | Gas (GHS definition)  |
| 8 Self-reactive substances and mixtures                                       | Not applicable              | -            | -           | -  | Gas (GHS definition)  |
| 9 Pyrophoric liquids  | Not applicable              | -            | -           | -  | Gas (GHS definition)  |
| 10 Pyrophoric solids  | Not applicable              | -            | -           | -  | Gas (GHS definition)  |
| 11 Self-heating substances and mixtures                                       | Not applicable              | -            | -           | -  | Gas (GHS definition)  |
| 12 Substances and mixtures, which in contact with water, emit flammable gases | Not applicable              | -            | -           | -  | Gas (GHS definition)  |
| 13 Oxidizing liquids  | Not applicable              | -            | -           | -  | Gas (GHS definition)  |
| 14 Oxidizing solids   | Not applicable              | -            | -           | -  | Gas (GHS definition)  |
| 15 Organic peroxides  | Not applicable              | -            | -           | -  | Gas (GHS definition)  |
| 16 Corrosive to metals  | Classification not possible | -            | -           | -  | Test methods applicable to gas substances are not available   |

### Health Hazards

| Hazard class                              | Classification  | symbol  | signal word   | hazard statement                                    | Rational for the classification   |
|---|---|---|---|---|---|
| 1 Acute toxicity (oral)                   | Classification not possible   | -   | -   | -   | No data available   |
| 1 Acute toxicity (dermal)                 | Classification not possible   | -   | -   | -   | No data available   |
| 1 Acute toxicity (inhalation: gas)        | Classification not possible   | -   | -   | -   | No data available   |
| 1 Acute toxicity (inhalation: dust, mist) | Not applicable  | -   | -   | -   | Gas (GHS definition)  |
| 1 Acute toxicity (inhalation: dust, mist) | Not applicable  | -   | -   | -   | Gas (GHS definition)  |
| 2 Skin corrosion / irritation             | Category 2  | Exclamation mark                                    | Warning   | Causes skin irritation                              | There was no data of this product. But it was set as category 2 based on that arsenic chloride (ID 1091, Chemical Abstracts Service 7784-34-1) is classified into category 2 since it stimulates the human skin (seriously).  |
| 3 Serious eye damage / eye irritation     | Category 2A   | Exclamation mark                                    | Warning   | Causes serious eye irritation                       | Although there is no data about this product, it was classified into Category 2A because arsenic chloride stimulates the human eye (seriously) (ID 1091, CAS 7784-34-1). Therefore, it was classified into Category 2A.   |
| 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 available.<br>Skin sensitization : it is not a deterministic conclusion (ATSDR, 2005; HSG, 1992) although there is no knowledge of the quality of a genuine article itself and skin sensitization may be shown to humans as an inorganic arsenic compound, in addition, it was presupposed that it cannot classify from the description in the humans of EHC 224 (2001) "development of the skin sensitization of inorganic arsenic is rare" since data is insufficient. |
| 5 Germ cell mutagenicity                  | Classification not possible   | -   | -   | -   | Without data. In addition, arsenic and inorganic arsenic compound are classified into the germ-cell mutagenicity category 3A (equivalent for GHS Category 1B-2) in Germany DFG (MAK/BAT, 2005).   |

|    |  |  |               |         |   |  |
|----|--|--|---------------|---------|---|--|
| 6  | Carcinogenicity  | Category 1A  | Health hazard | Danger  | May cause cancer (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)   | Arsenic and arsenic compound are categorized into the human carcinogens in IARC Suppl.7 (1987), ACGHI-TLV (2004), and MAK/BAT (2004). So it was classified into Category 1A.   |
| 7  | Toxic to reproduction  | Category 2   | Health hazard | Warning | Suspected of damaging fertility or the unborn child   | Although the knowledge of this product was not observed, it was considered as Category 2 based on the description related to human of EHC 224 (2001) which is Priority 1 document, about arsenic and arsenic compound, "the effect on reproduction is suggested", and knowledge of animals "fetus toxicity and teratogenicity in dose in which maternal toxicity is observed". In addition, there is the description that "the conclusion which is inorganic arsenic is not teratogen in humans is advocated" in Catalog of teratogenic agents (2004) equivalent to Priority 1.  |
| 8  | Specific target organs/systemic toxicity following single exposure   | Category 1 (digestive system, cardiovascular system, nervous system, kidneys, liver, respiratory)                            | Health hazard | Danger  | Cause damage to organs (digestive system, cardiovascular system, nervous system, kidneys, liver, respiratory)   | Although there was no information about this substance, the substance was classified as Category 1 (gastrointestinal system, cardio-vascular system, nervous system, kidneys, liver, respiratory system). Based on the report that in the forms of the arsenic and inorganic arsenic compounds it causes "symptoms in the gastrointestinal organs, disorders in the functions of the cardio-vascular and nervous systems, myelosuppression, alteration in the blood system and nephropathy" in humans (EHC 224 (2001)), and based on a similar report in PIM (Poisons Information Monographs) G042 (WHO/IPCS, 1996). In addition, there is a report in ACGIH (7th, 2001) that it affects the liver, upper airways and lungs.   |
| 9  | Specific target organs/systemic toxicity following repeated exposure | Category 1 (digestive system, nervous system, blood system, cardiovascular system, kidneys, liver, skin, respiratory organs) | Health hazard | Danger  | Causes damage to organs (digestive system, nervous system, blood system, cardiovascular system, kidneys, liver, skin, respiratory organs) through prolonged or repeated | Although the knowledge of this product was not observed, based on the description in the humans about arsenic and inorganic arsenics compounds, "gastrointestinal disturbances, neuropathy, affect to blood systems, and disorder of cardiovascular systems, kidney and liver were observed in the long term administration of inorganic arsenic. Target organ are gastrointestinal, heart, brains and kidney. The skin, marrow and peripheral nerves were also affected." (EHC 224 (2001), and PIM (Poisons Information Monographs) G042 (WHO/IPCS, 1996)) and the description of effect on the upper respiratory tract and lungs (ACGIH (7th, 2001)), therefore it was classified into Category 1 (digestive tract, cardiovascular systems, nervous systems, kidney, liver, blood systems, skin, respiratory system) |
| 10 | Aspiration hazard  | Not applicable   | -             | -       | -   | Gas (GHS definition)   |

### 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.              |