GHS Classification

ID36 Phenylmercury acetate

CAS 62-38-4 Date Classified: Jun. 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	–	–	–	Containing no chemical groups with explosive properties
2	Flammable gases	Not applicable	–	–	–	Classified as "solid" according to GHS definition
3	Flammable aerosols	Not applicable	–	–	–	Not aerosol products
4	Oxidizing gases	Not applicable	–	–	–	Classified as "solid" according to GHS definition
5	Gases under pressure	Not applicable	–	–	–	Classified as "solid" according to GHS definition
6	Flammable liquids	Not applicable	–	–	–	Classified as "solid" according to GHS definition
7	Flammable solids	Not classified	–	–	–	Classified as "flammable" according to ICSC (2000). Classified into Division 6.1 (UN#1674) (UN Recommendations on the Transport of Dangerous Goods)
8	Self-reactive substances and mixtures	Not applicable	–	–	–	Containing no chemical groups with explosive or self-reactive properties
9	Pyrophoric liquids	Not applicable	–	–	–	Classified as "solid" according to GHS definition
10	Pyrophoric solids	Not classified	–	–	–	Classified into Division 6.1 (UN#1674) (UN Recommendations on the Transport of Dangerous Goods)
11	Self-heating substances and mixtures	Not classified	–	–	–	Classified into Division 6.1 (UN#1674) (UN Recommendations on the Transport of Dangerous Goods)
12	Substances and mixtures, which in contact with water, emit flammable gases	Not classified	–	–	–	Stable to water (water solubility: 0.44g/100mL (20degC), ICSC (2000))
13	Oxidizing liquids	Not applicable	–	–	–	Classified as "solid" according to GHS definition
14	Oxidizing solids	Not classified	–	–	–	No data available, though being organic compounds containing oxygen bound to carbon and hydrogen. Classified into Division 6.1 by UN Recommendations on the Transport of Dangerous Goods (UN#1674)
15	Organic peroxides	Not applicable	–	–	–	Organic compounds containing no "-O-O-" structure
16	Corrosive to metals	Classification not possible	–	–	–	Test methods applicable to solid substances are not available

Health Hazards

Hazard class		Classification	symbol	signal word	hazard statement	Rational for the classification
1	Acute toxicity (oral)	Category 2	Skull and crossbones	Danger	Fatal if swallowed	Based on the rat LD50 (oral route) value of 22mg/kg representing the lower of the two testing data, 41mg/kg (RTECS (2005)) and 22mg/kg (HSDB (2005)).
1	Acute toxicity (dermal)	Classification not possible	–	–	–	No data available
1	Acute toxicity (inhalation: gas)	Not applicable	–	–	–	Due to the fact that the substance is "solid" according to the GHS definition and inhalation of its gas is not expected.
1	Acute toxicity (inhalation:	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	Based on the evidence of "reddening, pain, blurred vision and severe deep burn" (ICSC (J) (2005)).
3	Serious eye damage / eye irritation	Category 2	–	–	–	Based on the evidence of "reddening, pain, blurred vision and severe deep burn" (ICSC (J) (2005)).
4	Respiratory/skin sensitization	Respiratory sensitization: Classification not possible Skin sensitization: Category 1	(Respiratory sensitization) – (Skin sensitization) Exclamation mark	(Respiratory sensitization) – (Skin sensitization) Warning	(Respiratory sensitization) – (Skin sensitization) May cause allergic skin reaction	Respiratory sensitization: No data available Skin sensitization: based on the description in DFGOT vol.15 (2001) of the human health effects: "the substance induced skin sensitization." Also due to the fact that mercury is classified as "skin sensitization" by the ad hoc committee of the Japanese Society of Occupational Allergy, and "Skin Sensitizing Substance: Group 1" by the Japan Society for Occupational Health, though these classifications are not specifying mercury phenyl acetate per se.* * There is a provision to the effect that "the category refers to the substance concerned and its compounds, but does not identify all substances causing respiratory/skin sensitization.
5	Germ cell mutagenicity	Category 2	Health hazard	Warning	Suspected of causing genetic defects	Based on positive data on somatic cell mutagenicity tests in vivo and the absence of data on germ cell genotoxicity in vivo. The positive results (as mercury compounds) are also available in multi-generation mutagenicity tests and germ cell mutagenicity tests in vivo, but not used for effects assessment.
6	Carcinogenicity	Classification not possible	–	–	–	Insufficient data available
7	Toxic to reproduction	Category 2	Health hazard	Warning	Suspected of damaging fertility or the unborn child	Based on the evidence of central nervous/muscle system abnormality in offspring, described in RTECS (2006) (though no data are available on maternal toxicity).
8	Specific target organs/systemic toxicity following single exposure	Category 2 (kidneys, respiratory organs)	Health hazard	Warning	May cause damage to organs (kidneys, respiratory organs)	Based on the evidence reported in ICSC (J) 2000: "corrosive to the respiratory tract; corrosion following oral ingestion; adversely affects the kidney; may lead to renal failure. These effects may be delayed." Classified as priority 2 by ICSC (J).

9	Specific target organs/systemic toxicity following repeated exposure	Category 1 (nervous system, digestive system, respiratory system, kidneys)	Health hazard	Danger	Causes damage to organs through prolonged or repeated exposure (nervous system, digestive system, respiratory system, kidneys)	Based on the human evidence including "severe neurotoxicity...swelling of the mouth, reddening and malacia of the gingiva, coloring of gingiva (blue line), decayed tooth, buccopharyngeal swelling" and "dyspnea, respiratory depression, breathing disturbed by viscous liquid...purulent pneumonia noted at necropsy" following inhalation exposure (ATSDR (1999)), and the evidence from animal studies including "kidney damage" following oral exposure (IRIS (2002)). The effects on the mouth and gingiva observed in humans were not caused by direct irritation. The effects on experimental animals were observed at dosing levels within the guidance value ranges for Category 1.
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	-	-	-	Classification not possible due to lack of data
11	Hazardous to the aquatic environment (chronic)	Classification not possible	-	-	-	Classification not possible due to lack of data