

## GHS Classification

**ID515**

**CAS 123-30-8**

### Physical Hazards

**p-Aminophenol**

Date Classified: Sep. 20, 2006 (Environmental Hazards: Mar. 31, 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	—	—	—	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 HSDB (2006). Classified into Division 6.1 (UN#2261 (o-, m-, p-)) (UN Recommendation 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	—	—	—	Although classified as flammable, the substance does not catch fire easily (HSDB, 2006). Classified into Division 6.1 (UN#2512 (o-, m-, p-)) (UN Recommendations on the Transport of Dangerous Goods).
11 Self-heating substances and mixtures	Classification not possible	—	—	—	No data available
12 Substances and mixtures, which in contact with water, emit flammable gases	Not applicable	—	—	—	Containing no metals or metalloids (B, Si, P, Ge, As, Se, Sn, Sb, Te, Bi, Po, At)
13 Oxidizing liquids	Not applicable	—	—	—	Classified as "solid" according to GHS definition
14 Oxidizing solids	Not applicable	—	—	—	Organic compounds containing oxygen (but not fluorine and chlorine), with the oxygen bound to carbon and hydrogen (but not to other elements)
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 4	Exclamation mark	Warning	Harmful if swallowed	Based on the rat LD50 (oral route) value of 375mg/kg (RTECS (2006)).
1 Acute toxicity (dermal)	Not classified	—	—	—	Based on the rabbit LD50 (oral route) value of > 8,000mg/kg representing the lower of the two testing data. > 8,000mg/kg (IUCLID (2000)) and > 16,000mg/kg (RTECS (2006)).
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: dust, mist)	Classification not possible	—	—	—	No data available
1 Acute toxicity (inhalation: dust, mist)	Category 4	Exclamation mark	Warning	Harmful if inhaled	Based on the rat LC50 (inhalation of dust/mist) value of 1.48mg/L (IUCLID (2000)).
2 Skin corrosion / irritation	Category 3	—	Warning	Causes mild skin irritation	Based on the description in the report on rabbit skin irritation tests (RTECS (2006) and IUCLID (2000)): "Mild," "slightly irritating." The substance is thus considered a mild skin irritant.
3 Serious eye damage / eye irritation	Category 2B	—	Warning	Causes eye irritation	Based on the description in the report on rabbit eye irritation tests (RTECS (2006) and IUCLID (2000)): "Mild," "slightly irritating." The substance is thus considered a mild eye irritant.
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 an allergic skin reaction	Respiratory sensitization: Based on the description in HSDB (2003) of the human health effects: "The substance induces contact dermatitis and bronchial asthma." Skin sensitization: Due to the fact that the substance is classified as a "Skin Sensitizing Substance" by the Japanese Society for Contact Dermatitis.
5 Germ cell mutagenicity	Classification not possible	—	—	—	Based on the absence of data on in vivo mutagenicity/genotoxicity tests and no positive data on in vitro mutagenicity tests (several indices), described in NTP DB (Access on May 2006), and Report by the Ministry of Health, Labour and Welfare (1997).
6 Carcinogenicity	Classification not possible	—	—	—	Classification not possible based on expert judgment in the absence of existing classification, though PATTY (4th, 1999) presents toxicity data.
7 Toxic to reproduction	Category 2	Health hazard	Warning	Suspected of damaging fertility or the unborn child	Based on the evidence of a significant increase in the incidence of exencephalia and malformation of the limbs, tail and eye in the pups observed in teratogenicity studies with Syrian hamsters using intraperitoneal injection, described in PATTY (4th, 1999) (though no data are available regarding parental toxicity). Also based on the evidence of maternal toxicity and teratogenicity observed in rat teratogenicity studies using the oral route of exposure, described in Teratology (1986).

8	Specific target organs/systemic toxicity following single exposure	Category 1 (blood system)	Health hazard	Danger	Causes damage to organs (blood system)	Based on the human evidence: "p-Aminophenol induces methemoglobinemia" (PATTY (4th, 1999)).
9	Specific target organs/systemic toxicity following repeated exposure	Category 1 (kidneys, blood system)	Health hazard	Danger	Causes damage to organs through prolonged or repeated exposure (kidneys, blood system)	Based on the human evidence: "p-Aminophenol produces nephrotoxicity; induces methemoglobinemia" (PATTY (4th, 1999)). Also based on the evidence from animal studies including "dark brown urine was observed; urinalysis revealed an increase in epithelial cells; a band of white colored tissue was present at the corticomedullary junction; basophilic renal tubules were found" (Report by the Ministry of Health, Labour and Welfare (1997)). "dose-dependent nephrosis was noted in both sexes at weeks 13 and 27, and in males that had been kept away from the test material at week 7 during the recovery period" (PATTY (4th, 1999)).
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 1	Environment	Warning	Very toxic to aquatic life	It was classified into Category 1 from 72 hours ErC50=0.1mg/L of the algae (Selenastrum) (MOE Eco-Toxicity Tests of Chemicals, 1996).
11 Hazardous to the aquatic environment (chronic)	Category 1	Environment	Warning	Very toxic to aquatic life with long lasting effects	Although acute toxicity is Category 1 and bio-accumulation is low (BCF=46(Existing Chemical Safety Inspections Data. )), since there was no rapidly degrading (the decomposition by BOD: 6%(Existing Chemical Safety Inspections Data)), it was classified into Category 1.