

## GHS Classification

**ID338**

**CAS 591-27-5**

### Physical Hazards

**m-Aminophenol**

Date Classified: Apr. 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 into Division 6.1 (UN#2512) (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#2512) (UN Recommendations on the Transport of Dangerous Goods)
11 Self-heating substances and mixtures	Classification not possible	-	-	-	Test methods applicable to liquid substances are not available - melting point: 122-123degC (Merck, 13th, 2001), test temperature: 140degC
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) of 920mg/kg (CERI Hazard Data 2001-34 (2002)).
1 Acute toxicity (dermal)	Category 3	Skull and crossbones	Danger	Toxic in contact with skin	Based on the rat LD50 (dermal route) of 1,000mg/kg (CERI Hazard Data 2001-34 (2002)).
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	-	-	-	Insufficient data available
2 Skin corrosion / irritation	Category 3	-	Warning	Causes mild skin irritation	Based on the description in the report on rabbit skin irritation tests (RTECS (2004)): "Mild."
3 Serious eye damage / eye irritation	Category 2A	Exclamation mark	Warning	Causes serious eye irritation	Based on the description in the report on rabbit eye irritation tests (CERI-NITE Hazard Data 2001-34 (2002)): "moderate irritant."
4 Respiratory/skin sensitization	Respiratory sensitization: Classification not possible Skin sensitization: Category 1	Exclamation mark	Warning	May cause allergic skin reaction	Respiratory sensitization: No data available Skin sensitization: based on the positive results in guinea pig skin sensitization tests based on the Maximization method described in CERI Hazard Data 2001-34 (2002), and classified as "skin sensitization" by The Japanese Society for Contact Dermatitis.
5 Germ cell mutagenicity	Not classified	-	-	-	Based on the absence of data on germ cell mutagenicity tests in vivo, negative data on somatic cell mutagenicity tests in vivo, and negative data on multi-generation mutagenicity tests (dominant lethal tests), described in CERI Hazard Data 2000-34 (2002).
6 Carcinogenicity	Classification not possible	-	-	-	Cannot be classified due to lack of existing classification.
7 Toxic to reproduction	Classification not possible	-	-	-	Based on the description in CERI Hazard Data 2001-34 (2002): No effects are observed in dams and their offspring. However, classification is not possible because of the absence of data on the reproductive toxicity to males.
8 Specific target organs/systemic toxicity following single exposure	Category 2 (nervous system, blood system, liver)	Health hazard	Warning	May cause damage to organs (nervous system, blood system, liver)	Based on the evidence from animal studies including "tremor, salivation, brown urine, abdominal position, achromia of the limbs and auricle, a decrease in locomotor activity focal hepatic necrosis associated with hemolysis caused by the administration of 3-aminophenol" (the Ministry of Health, Labour and Welfare (2001)). The kidneys and spleen, in which the effects are also observed, are not considered as specific target organs because the symptoms are not severe and attributable to hemolysis. The effects on experimental animals were observed at dosing levels within the guidance value ranges for Category 2.
9 Specific target organs/systemic toxicity following repeated exposure	Category 2 (blood system)	Health hazard	Warning	May cause damage to organs through prolonged or repeated exposure (blood system)	Based on the evidence from animal studies including "brown-black urine due to methemoglobin in the urine" (the Ministry of Health, Labour and Welfare (2001)). The effects on experimental animals were observed at dosing levels within the guidance value ranges for Category 2.
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 48 hours EC50=447microg/L of the crustacea (Daphnia magna) (MOE Risk Assessment vol. 2 (2003) and others).
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<40(Existing Chemical Safety Inspections Data, )), since there was no rapidly degrading (the decomposition by BOD: 0%(Existing Chemical Safety Inspections Data)), it was classified into Category 1.