

GHS Classification

ID508

3-Methylpyridine

CAS 108-99-6

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	—	—	—	Containing no chemical groups with explosive properties
2 Flammable gases	Not applicable	—	—	—	Classified as "liquid" according to GHS definition
3 Flammable aerosols	Not applicable	—	—	—	Not aerosol products
4 Oxidizing gases	Not applicable	—	—	—	Classified as "liquid" according to GHS definition
5 Gases under pressure	Not applicable	—	—	—	Classified as "liquid" according to GHS definition
6 Flammable liquids	Category 3	Flame	Warning	Flammable liquid and vapour	The flash point is 38degC (c.c.) (ICSC (2000)), which is classified into "Category 3." Classified into Class 3 and Packing Group III (UN#2313, Picoline) (UN Recommendations on the Transport of Dangerous Goods).
7 Flammable solids	Not applicable	—	—	—	Classified as "liquid" according to GHS definition
8 Self-reactive substances and mixtures	Not applicable	—	—	—	Containing no chemical groups with explosive or self-reactive properties
9 Pyrophoric liquids	Not classified	—	—	—	Classified into Class 3 (UN#2313, Picoline) (UN Recommendations on the Transport of Dangerous Goods).
10 Pyrophoric solids	Not applicable	—	—	—	Classified as "liquid" according to GHS definition
11 Self-heating substances and mixtures	Classification not possible	—	—	—	Test methods applicable to liquid substances are not 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	—	—	—	Organic compounds containing no oxygen, fluorine and chlorine
14 Oxidizing solids	Not applicable	—	—	—	Classified as "liquid" according to GHS definition
15 Organic peroxides	Not applicable	—	—	—	Organic compounds containing no "-O-O-" structure
16 Corrosive to metals	Not classified	—	—	—	Classified into Class 3 (UN#2313, Picoline) (UN Recommendations on the Transport of Dangerous Goods).

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 400mg/kg representing the lower of the two testing data, 400mg/kg and 800mg/kg (CERI-NITE Hazard Assessment No.29 (2005)).
1 Acute toxicity (dermal)	Category 3	Skull and crossbones	Danger	Toxic in contact with skin	Based on the rabbit LD50 (dermal route) value of 800mg/kg representing the lower of the two testing data, 800mg/kg and 2,000mg/kg (PATTY (4th, 2000)).
1 Acute toxicity (inhalation: gas)	Not applicable	—	—	—	Due to the fact that the substance is "liquid" according to the GHS definition and inhalation of its gas is not expected.
1 Acute toxicity (inhalation: vapour)	Category 3	Skull and crossbones	Danger	Toxic if inhaled	Based on the LC50 value of 1,300ppm calculated from the rat LC50 (4 hour inhalation of vapour) value of 5.03mg/L representing the lower of the two testing data of 5.03mg/L and 12.8mg/L (CERI-NITE Hazard Assessment No.29 (2005)) was lower than 90% of the saturated vapour concentration (7,970ppm) under a saturated vapour pressure of 805Pa (6.05mmHg) (25degC) (CERI Hazard Data 2001-52 (2002)), the substance was considered as "vapour containing substantially no mist" and was classified based on standard values expressed in ppm.
1 Acute toxicity (inhalation: dust, mist)	Classification not possible	—	—	—	No data available
2 Skin corrosion / irritation	Category 1A-1C	Corrosion	Danger	Causes severe skin burns and eye damage	Based on the evidence of "corrosion" from rabbit skin irritation tests (4 hour application) (CERI-NITE Hazard Assessment No.29 (2005)). Although classified into Category 1A-1C, the substance should be placed in Category 1A from the viewpoint of safety if further subclassification is needed.
3 Serious eye damage / eye irritation	Category 1	Corrosion	Danger	Causes serious eye damage	Classified as Category 1 in accordance with the technical guideline, given the fact that the substance is classified into Category 1A-1C for "2. Skin corrosion / irritation."
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 Skin sensitization: "No evidence of skin sensitization" was obtained in guinea pig skin sensitization tests (CERI Hazard Data 2001-52 (2002)). However, classification is not possible, with only one set of data showing "negative" available.
5 Germ cell mutagenicity	Not classified	—	—	—	Based on the absence of data on multi-generation mutagenicity tests and germ cell mutagenicity tests in vivo, negative data on somatic cell mutagenicity tests in vivo (micronucleus tests), described in NTP DB (Access on May 2006), CERI-NITE Hazard Assessment No.29 (2005) and CERI Hazard Data 2001-52 (2002).
6 Carcinogenicity	Classification not possible	—	—	—	Classification not possible based on expert judgment in the absence of existing classification, though CERI Hazard Data 2001-52 (2002) provides some toxicity data.
7 Toxic to reproduction	Classification not possible	—	—	—	No data available

8	Specific target organs/systemic toxicity following single exposure	Category 1 (nervous system), Category 3 (narcotic effects, respiratory tract irritation)	Health hazard	Danger	Causes damage to organs (nervous system) (Respiratory tract irritation) May cause respiratory irritation (Narcotic effects) May cause drowsiness or dizziness	Based on the human evidence including "autonomic disorder such as reduced tension of the vascular smooth muscles, decreased blood pressure and bradycardia, increased pilomotor reflex, impaired thermoregulatory functions, and symptoms of polyneuropathy" (CERI-NITE Hazard Assessment No.29 (2005)), "autonomic disorder, bradycardia, hypotension, impaired thermoregulatory functions, mild central nervous system disorder" (PATTY (4th, 2000)), "the substance, in the form of fume, irritates the respiratory tract" (ICSC (J) 1999).
9	Specific target organs/systemic toxicity following repeated exposure	Category 1 (liver)	Health hazard	Danger	Causes damage to organs through prolonged or repeated exposure (liver)	Based on the human evidence including "increased alanine aminotransferase/aspartate aminotransferase activity indicative of hepatotoxicity, and bilirubinemia" (CERI-NITE Hazard Assessment No.29 (2005)), "increased activity of hepatic enzymes (SGOT and SGPT) was observed in humans subject to prolonged exposure" (PATTY (4th, 2000)).
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 3	-	-	Harmful to aquatic life	It was classified into Category 3 from 24-72 hours ErC50=15mg/L of the algae (Selenastrum) (CERI/NITE Hazard Assessment Report (preliminary version), 2006).
11 Hazardous to the aquatic environment (chronic)	Category 3	-	-	Harmful to aquatic life with long lasting effects	Although acute toxicity was Category 3 and the bio-accumulation potential was low (BCF<29(Existing Chemical Safety Inspections Data)), since there was no rapidly degrading (the decomposition by BOD: 3%(Existing Chemical Safety Inspections Data)), it was classified into Category 3.