GHS Classification

ID517 4-Allyl-1,2-dimethoxybenzene

CAS 93-15-2 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	Not classified	—	—	—	The flash point is 99degC (c.c.) (NFPA (13th, 2002))
7	Flammable solids	Not applicable	—	—	—	Classified as "liquid" according to GHS definition
8	Self-reactive substances and mixtures	Classification not possible	—	—	—	Classification not possible due to lack of data, though containing unsaturated bonds (olefin)
9	Pyrophoric liquids	Not classified	—	—	—	Stable to air, heat and light (HSDB, 2006); not pyrophoric when in contact with air at ordinary temperatures
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 oxygen (but not fluorine and chlorine), with the oxygen bound to carbon and hydrogen (but not to other elements)
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	Classification not possible	—	—	—	No data 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 1,179mg/kg (PATTY (4th, 1999)).
1	Acute toxicity (dermal)	Classification not possible	—	—	—	Insufficient data available
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:	Classification not possible	—	—	—	No data available
1	Acute toxicity (inhalation: dust, mist)	Classification not possible	—	—	—	No 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 (PATTY (4th, 1999)): "Slightly irritating."
3	Serious eye damage / eye irritation	Category 2B	—	Warning	Causes eye irritation	Based on the description in the report on rabbit eye irritation tests (PATTY (4th, 1999)): "Slightly irritating."
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: According to the description in HSDB (2002) of human health effects, a Maximization test showed no indication of sensitization in humans. 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, and negative data on somatic cell mutagenicity tests in vivo (micronucleus tests), described in NTP DB (Access on May 2006).
6	Carcinogenicity	Category 1B	Health hazard	Danger	May cause cancer	Based on expert judgment in the absence of existing classification, though NTP TR491 (2000) presents toxicity data and the substance is classified as Category R by NTP (2005).
7	Toxic to reproduction	Classification not possible	—	—	—	Insufficient data available
8	Specific target organs/systemic toxicity following single exposure	Classification not possible	—	—	—	No data available
9	Specific target organs/systemic toxicity following repeated exposure	Category 2 (liver, stomach, blood system, adrenal, submandibular gland)	Health hazard	Warning	May cause damage to organs through prolonged or repeated exposure (liver, stomach, blood system, adrenal, submandibular gland)	Based on the evidence from animal studies including "hepatocellular hypertrophy, oval cell hyperplasia, bile duct hyperplasia (females), cystic degeneration, neuroendocrine cell hyperplasia and atrophy of the glandular stomach," "increased platelet counts; increased serum activities of alanine aminotransferase and sorbitol dehydrogenase indicative of hepatocellular lesions; increased incidences of adrenal gland cortical hypertrophy and/or cytoplasmic alteration in the submandibular gland occurred," "the incidences of lesions of the glandular stomach were increased" (NTP TR491 (2000)). 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 3	-	-	Harmful to aquatic life	It was classified into Category 3 from 96 hours LC50=14mg/L of the fish (Oryzias Latipest) (MOE eco-toxicity tests of chemicals, 2003).
11	Hazardous to the aquatic environment (chronic)	Not classified	-	-	-	Since there was rapidly degrading (the decomposition by BOD: 89% (Existing Chemical Safety Inspections Data)) and the bio-accumulation was low (log Kow=3.03 (PHYSPROP Database, 2005)), it was claasified into Not classified.