

GHS Classification

ID121

Vinyl acetate

CAS 108-05-4

Date Classified: May 24, 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 2	Flame	Danger	Highly flammable liquid and vapour	The flash point is -8degC (c.c.) (ICSC, 1999) and the boiling point is 72degC which is classified into Category 2. Those containing stabilizers are classified into Class 3 and Packing Group II (UN#1301) (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	Classification not possible	-	-	-	Classification not possible due to lack of data, though containing unsaturated bonds. Those containing stabilizers are classified into Class 3 and Packing Group II (UN#1301) (UN Recommendations on the Transport of Dangerous Goods)
9 Pyrophoric liquids	Not classified	-	-	-	Not pyrophoric when in contact with air at ordinary temperatures; the auto-ignition temperature is 402degC (ICSC, 1999)
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 Those containing stabilizers are classified into Class 3 (UN Recommendations on the Transport of Dangerous Goods, UN#1301)

Health Hazards

Hazard class	Classification	symbol	signal word	hazard statement	Rational for the classification
1 Acute toxicity (oral)	Category 5	-	Warning	May be harmful if swallowed	Based on the testing data of rat LD50 (oral route) of 2,900mg/kg (MOE Risk Assessment vol. 2 (2003)).
1 Acute toxicity (dermal)	Category 5	-	Warning	May be harmful in contact with skin	Based on the testing data of rabbit LD50 (dermal route) of 2,335mg/kg (CER-NITE Hazard Data No.60 (2004)).
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 4	Exclamation mark	Warning	Harmful if inhaled	Based on the rat LC50 value of 3,184ppm, equivalent to the testing data of rat LC50 (4-hour inhalation) of 11.4mg/L (MOE Risk Assessment vol. 2 (2003)), was lower than 90% of the saturated vapour concentration (110,000ppm) under a saturated vapour pressure of 11kPa (20degC), the substance 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 3	-	Warning	Causes mild skin irritation	Based on the description in the report on rabbit skin irritation tests (CER-NITE Hazard Assessment No.60 (2004)): "mild irritation."
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 (CER-NITE Hazard Assessment No.60 (2004)): "severe irritant."
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 the report on guinea pig skin sensitization tests (the Buehler method) (CER-NITE Hazard Assessment No.60 (2004)) - Six out of 20 specimens are positive.
5 Germ cell mutagenicity	Category 2	Health hazard	Warning	Suspected of causing genetic defects	Based on the absence of data on multi-generation mutagenicity tests, negative data on germ cell mutagenicity tests in vivo (micronucleus tests), positive data on somatic cell mutagenicity tests in vivo (micronucleus tests, chromosome aberration tests), and the absence of data on germ cell genotoxicity tests in vivo, described in CER-NITE Hazard Assessment No.60 (2004), DFGOT vol.21 (2005), IARC 63 (1995), ATSDR (1992), and NTP DB (Access on February 2006).
6 Carcinogenicity	Category 2	Health hazard	Warning	Suspected of causing cancer	Due to the fact that the substance is classified as Category A3 by ACGIH (2001), Group 2B by IARC (1995).
7 Toxic to reproduction	Not classified	-	-	-	Based on the description in the report on rat and mouse reproductive toxicity and teratogenicity tests (CER-NITE Hazard Assessment No.60 (2004), IARC 63 (1995), ATSDR (1992)): The reproductive toxicity is nil, minimal or toxicologically insignificant.

8	Specific target organs/systemic toxicity following single exposure	Category 3 (respiratory tract irritation)	Exclamation mark	Warning	(Respiratory tract irritation) May cause respiratory irritation	Based on the human evidence including "respiratory irritation" (CERl-NITE Hazard Assessment No.60 (2004)). The substance is considered "irritating" to the respiratory tract.
9	Specific target organs/systemic toxicity following repeated exposure	Category 2 (respiratory organs)	Health hazard	Warning	May cause damage to organs through prolonged or repeated exposure (respiratory organs)	Based on the human evidence including "upper respiratory inflammation" (MOE Risk Assessment vol. 2 (2003)) and the evidence from animal studies including "pneumonia, rhinitis, atrophy of the nasal olfactory epithelium, atrophy of the mucus-secreting gland, atrophy and squamous metaplasia of the olfactory epithelium, basal cell hyperplasia" (CERl-NITE Hazard Assessment No.60 (2004)). 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 2	-	-	Toxic to aquatic life	It was classified into Category 2 from 96 hours LC50=2.39mg/L of the fish (<i>Oryzias Latipest</i>) (CERl/NITE Hazard Assessment Report, 2005).
11 Hazardous to the aquatic environment (chronic)	Not classified	-	-	-	Since there was rapidly degrading (the decomposition by BOD: 90% (Existing Chemical Safety Inspections Data)) and the bio-accumulation was low (log Kow=0.73 (PHYSPROP Database, 2005)), it was classified into Not classified.