GHS Classification

ID116

C 1 C	107 05 1					
CAS	10/-05-1					
Physi	cal Hazards					

3–Chloropropene; Allyl chloride Date Classified: May 24, 2006 (Environmental Hazards: Mar. 31, 2006)

Reference Manual: GHS Classification Manual (Feb. 10, 2006)

Haz	ard 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 -32degC (c.c.) (ICSC, 2004) and the boiling point is 45degC which is classified into Category 2. Classified into Class 3 and Division 6.1 (UN#1100) (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 classified	-	-	-	No data available, though containing unsaturated bonds. Classified into Class 3 and Division 6.1 (UN#1100) (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 390degC (ICSC, 2004)	
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 cases	Not applicable	-	-	-	Containing no metallo or metalloids (B, Si, P, Ge, As, Se, Sn, Sb, Te, Bi, Po, At)	
13	Oxidizing liquids	Not applicable	-	-	-	Organic compounds containing chlorine (but not oxygen and fluorine), with the chlorine 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	-	-	-	Test methods applicable to gaseous substances are not available - boiling point: 45degC (ICSC, 2004), test temperature: 55degC	

Health Hazards

Haz	ard 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 testing data of rat LD50 (oral route) of 450mg/kg (SIDS (2003)).
1	Acute toxicity (dermal)	Category 5	-	Warning	May be harmful in contact with skin	Based on the testing data of rat LD50 (dermal route) of 2,026mg/kg (SIDS (2003)).
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 (4 hours) of 7.8mg/L (2,500ppm), calculated from the testing data of rat LC50 (2-hour inhalation) of 11mg/L (MOE Risk Assessment vol. 2 (2003)), was lower than 90% under of the saturated vapour concentration (389,000ppm) under a saturated vapour pressure of 39.3kPa (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 1A-1C	Corrosion	Danger	Causes severe skin burns and eye damage	Based on the description in the report on animal skin irritation tests (SIDS (2003), CERI Hazard Data 98-26 (1999)): Midi irritation and damage to the skin are observed. And based on the data on human health effects (CERI Hazard Data 98-26 (1999)): Severe burn and pain are observed (the intensity of irritation is unknown, while the substance is corrosive to the skin), although the substance should be placed in Category IA from the viewpoint of safety, if further subclassification is needed.
3	Serious eye damage / eye irritation	Category 1	Corrosion	Danger	Causes serious eye damage	Based on the description in the report on animal eye irritation tests (CERI Hazard Data 98-26 (1999), SIDS (2003)): Mild irritation is observed. And based on the data on human health effects (ACGIH (7th, 2001)): Severe irritation associated with pain and corneal injury is observed, which may cause vision loss. The substance could cause irreversible irritation to the eyes.
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 data available
5	Germ cell mutagenicity	Not classified	-	-	-	Based on the negative data on multi-generation mutagenicity tests, the absence of data on germ cell mutagenicity tests in vivo, and negative data on somatic cell mutagenicity tests in vivo (chromosome aberration tests), described in SIDS (2003), NTP DB (Access on February 2006) and IARC
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).

7	Toxic to reproduction	Category 2	Health hazard	Warning	Suspected of damaging fertility or the unborn child	Based on the description in CERI Hazard Data 98-26 (1999): Malformations such as a hernia of the umbilical cord are observed in offspring at dosing levels toxic to dams; sperm abnormalities are observed, though no description is available for the general toxicity to parental animals.
8	Specific target organs/systemic toxicity following single exposure	Category 1 (respiratory organs, nervous system, kidneys, liver, heart), Category 3 (narcotic effects)	Health hazard and Exclamation mark	Danger Warning	Causes damage to organs (respiratory organs, nervous system, kidneys, liver, heart) (Narcotic effects) May cause drowsiness or dizziness	Based on the human evidence including "pulmonary edema (CERI Hazard Data 98-26 (1999)), and the evidence from animal studies including "nervous symptoms (a decrease in mobility, lethargy, dyspnea, paralysis of the hind limbs, tremor, convulsions, etc.), histologic damage to the kidneys and liver, degeneration of the heart muscle and hepatocytes, irritation to the mucous, narcotic influence, pulmonary congestion/hemorrhage/edema" (CERI Hazard Data 98-26 (1999)). The effects on experimental animals were observed at dosing levels within the ranges for Category 1.
9	Specific target organs/systemic toxicity following repeated exposure	Category 1 (nervous system, kidneys, heart, liver)	Health hazard	Danger	Causes damage to organs through prolonged or repeated exposure (nervous system, kidneys, heart, liver)	Based on the human evidence including "debility, paresthesia, distal paralysis" (MOE Risk Assessment vol. 2 (2003)), "renal toxicity caused by chronic exposure (reduction of the membrane permeability of the glomeruli, renal tubular degeneration, oliguresis, pain on urination, nycturia), neuropathy (tremor of the hands and eyelids, an increase in tendon/periosteal reflexes, polyhidrosis, reduced body temperature, cyanosis, somnipathy, paresthesia in the hands and feet), adverse effects on the cardiovascular system (a decrease in myocardial contraction, reduction in the intensity of heart sounds, cardiac murmur, cardiodynia), changes in the hepatic function" (CERI Hazard Data 98-26 (1999)), and the evidence from animal studies including "hepatic sinusoidal expansion, hepatocyte swelling, focal necrosis, degeneration of the glomeruli, necrosis of the renal tubular epithelium, interstitial growth, degeneration of the peripheral nerves" (CERI Hazard Data 98-26 (1999)). The effects on experimental animals were observed at dosing levels within the guidance evalue ranges for Category 1.
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 TLm=19780microg/L of the fish (Fathead Minnows) (MOE Risk Assessment vol. 3, 2004).
11 Hazardous to the aquatic environment (chronic)	Not classified	-	-	-	Since there was rapidly degrading (the decomposition by BOD: 62% (Existing Chemical Safety Inspections Data)) and the bio-accumulation was low (BCF=5.6 (Existing Chemical Safety Inspections Data)), it was claasified into Not classified.