

GHS Classification

ID582

Lead, tetraethyl-

CAS 78-00-2

Date Classified: Mar. 23, 2006 (Environmental Hazards: Feb. 10, 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	-	-	-	There are no chemical groups associated with explosive properties present in the molecules.
2 Flammable gases	Not applicable	-	-	-	Liquid (GHS definition)
3 Flammable aerosols	Not applicable	-	-	-	Not aerosol products
4 Oxidizing gases	Not applicable	-	-	-	Liquid (GHS definition)
5 Gases under pressure	Not applicable	-	-	-	Liquid (GHS definition)
6 Flammable liquids	Category 4	-	Warning	Combustible liquid	Although the flash point at 93 - 94 degC (Hommel, Sax) is at the maximum, or outside of Category 4, there is other information, including 71 degC, 80 degC, etc., in another document (IUCLID (2000)). These may have been influenced by impurity dichloroethane (flash point: 13 degC). Also taking these commercial items into consideration, it was classified as "Category 4".
7 Flammable solids	Not applicable	-	-	-	Liquid (GHS definition)
8 Self-reactive substances and mixtures	Not applicable	-	-	-	There are no chemical groups associated with self-reactive properties present in the molecule.
9 Pyrophoric liquids	Not classified	-	-	-	Not classified in UNRTDG Class: 4.2
10 Pyrophoric solids	Not applicable	-	-	-	Liquid (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 classified	-	-	-	It is not made a class 4.2 by UNRTDG. Aqueous solubility measurements is carried out. It is clear not to carry out an intense reaction, even if it contacts water.
13 Oxidizing liquids	Not applicable	-	-	-	Organic compounds containing no oxygen, fluorine and chlorine.
14 Oxidizing solids	Not applicable	-	-	-	Liquid (GHS definition)
15 Organic peroxides	Not applicable	-	-	-	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 2	Skull and crossbones	Danger	Fatal if swallowed	Category 2 based on SPECIES: Rat; ENDPOINT: LD50; VALUE(ave.): 13.1mg/kg;
1 Acute toxicity (dermal)	Category 3	Skull and crossbones	Danger	Toxic in contact with skin	It was set as Category 3 based on the rabbit dermal LD50 = 990mg/kg (DFGOT vol.15 (2001)).
1 Acute toxicity (inhalation: gas)	Not applicable	-	-	-	Liquid (GHS definition)
1 Acute toxicity (inhalation: vapour)	Category 1	Skull and crossbones	Danger	Fatal if inhaled	Since saturated vapor at room temperature is about 500ppm, it was evaluated as gas. Rat LC50 converted for 4 hour is 32.13ppm and falls into Category 1. (When the same experiment was assumed to be steam and converted for 4 hours the value is 0.425mg/L and it is also Category 1.)
1 Acute toxicity (inhalation: dust, mist)	Classification not possible	-	-	-	Classification not possible due to lack of data
2 Skin corrosion / irritation	Category 2	Exclamation mark	Warning	Causes skin irritation	It was classified as "Category 2" based on IUCLID, etc.
3 Serious eye damage / eye irritation	Category 2A-2B	Exclamation mark	Warning	Causes serious eye irritation	It was classified into "Category 2" based on IUCLID etc. There is no experimental data which distinguishes 2A and 2B.
4 Respiratory/skin sensitization	Classification not possible; Skin sensitization: Classification not possible	(Respiratory sensitization)-; (Skin sensitization)-	(Respiratory sensitization)-; (Skin sensitization)-	(Respiratory sensitization)-; (Skin sensitization)-	No data available
5 Germ cell mutagenicity	Not classified	-	-	-	The substance was regarded as "outside the categories" because it was negative in rat dominant lethal tests and there are no other in vivo data. It was also negative in the bacterial return modification test.
6 Carcinogenicity	Not classified	-	-	-	Since it was judged as class 3 in IARC, and A4 in ACGIH, it was set as "Outside of Category."
7 Toxic to reproduction	Category 2	Health hazard	Warning	Suspected of damaging fertility or the unborn child	Although the ferotoxicity of rat/mouse is observed only in the administration range occurring maternal toxicity (ACGIH (2001)), but the material have extremely-high toxicity and it cannot be judged as the toxicity effect to mother is the only cause of the effect to embryo. R61 and R62 are attached by the category of EU. and it is classified into the "Category 2" by the above.

8	Specific target organs/systemic toxicity following single exposure	Category 1 (central nervous system); Category 3 (respiratory tract irritation)	Health hazard	Danger	Cause damage to organs (central nervous system); May cause respiratory irritation or may cause drowsiness and dizziness (respiratory tract irritation)	Since the central nervous system effects are reported in laborers and the animals experiments, it was classified into "Category 1." Moreover, "Category 3" was added since the irritations of the nose and the throat are suggested (HSFS (2002)).
9	Specific target organs/systemic toxicity following repeated exposure	Category 1 (inhalation, nervous system)	Health hazard	Danger	Causes damage to organs (inhalation, nervous system) through prolonged or repeated exposure	Since nervous system damage was seen in the gasoline inhalation addict, and the expert described that a major factor was a tetraethyl lead (Patty (5th.2001)), it was classified in "Category 1".
10	Aspiration hazard	Classification not possible	-	-	-	Insufficient 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 96-hour LC50=0.02mg/L of fishes (Bluegill) (EHC85, 1989).
11 Hazardous to the aquatic environment (chronic)	Category 1	Environment	Warning	Very toxic to aquatic life with long lasting effects	Classified into Category 1, since acute toxicity was Category 1, and it is a metallic compound, behavior in water and bioaccumulative potential are unknown.